


## Chapter 41 (Video Clip 41) - Specifications

<b>SPECIFICATIONS Type 1, Model Year 1970</b>	
Style	Convertible, Model 151 is the Beetle Karmann convertible
Serial Number	1502756289 (on Label by Lt. Front Windshield and by spare tire)
Chassis Number	1502756289 (under seat on rear Tunnel) 15 model #; 0 year 1970; 2756289 is the Serial Number
Engine Number	B6326958 (on Engine Generator Stand) 1600cc Dual Relief, Single Port. <b>Note on 3-6-2012 Dual Port Heads were installed</b>
<b>Color:</b> Body/Top/Seats (Shown at Right) <b>Wheel Rims:</b> L 91 Chrome/Silver/Grey (alternate Dupont C8501) <b>Interior:</b> L 43 Grey-black Front Seat Frame: SL 43 Grey-Black (alternate 2010 GM Dark Labrinth Gray 707S) <b>Engine Tin:</b> #99 Black With 60-70% Gloss therefore use 50% Flattener #4531S	 <p style="text-align: center;"> <span style="margin-right: 100px;">Body</span> <span style="margin-right: 100px;">Convertible Top</span> <span>Leatherette</span> </p> <p style="text-align: center;"> <span style="margin-right: 100px;">Clementine</span> <span style="margin-right: 100px;">Black</span> <span>Black</span> </p>
Engine Size	1600cc, Bore 3.36 in, Stroke 2.72 in, Capacity 96.66 Cu. In.
Engine Compression	7.5:1 SAE HP 57 b. h. p. @ 4400 RPM, Torque 81.7 lb. ft
Valve Clearance (engine cold)	0.004 in or 0.10mm, 2 Valves per Cylinder (Total 8)
Fuel	91 octane 26.1 mpg at half payload (Note: Jan 2012, I started adding 1 oz of Lucas Oil Ethanol Gas treatment to each 5 gallons of gas, as shown below)
Tire Size (Original)	6.00 X 15 L Bias Ply Whitewall Tire; 16 PSI Front, 24 PSI Rear
Tire Size (As of July 2008)	165R X 15 Radial Whitewall Tire; 20 PSI Front, 28 PSI Rear
Spark Plugs	0.28" (0.7mm) Bosch W 145 T 1; or Champion L88, Thread 14mm
Dwell	0.016" (0.4mm) at 50 Degrees, Vacuum Disconnected & Hose Plugged
Timing	0 Degrees at TDC @ 850 RPM, Vacuum hose disconnected and Plugged (Aug. '69-July '70 B 0 degrees TDC)
Advance/Retard Range	Vacuum (Advance Only): 17-19deg @ 1.3 In. Hg, 32-35deg @ 3.2 In. Hg
Distributor	Vacuum spark advance
Carburetor	Solex 30 PICT-3
Idle Speed	850 RPM +/- 50
Firing Order	1-4-3-2
Operating Temperature	Cooling Interpreted: Thermostat opens @ 149 - 158°F
Oil Press. Sending Unit	Should open, or turn off OIL light, between 2.1 - 6.4 PSI
Oil Pressure	SAE 30 Oil @ 158°F @ 2500 RPM, Min 28 PSI, Max 40 PSI
Clutch	Single plate, dry clutch free play 0.4 -0.8 in. (10-20mm)
Gear Ratios	1st. gear 3.8:1; 2nd. gear 2.06:1, 3rd. gear 1.26:1; 4th. gear 0.89:1; reverse 3.61:1; Differential ratio 4.125:1
Chassis	Frame with Tube Center section forked and welded on platform

## SPECIFICATIONS Type 1, Model Year 1970 - (Continued 2 of 3)

Front Axle	Independent Suspension ,with 2 Trailing arms on each side, Horizontal Torsion bars. Double-acting hydraulic telescopic shock absorbers with progressive rubber stops.
Rear Axle	Independent Suspension by trailing arms and diagonal links and rear axle, each with 2 constant velocity joints. Progressive rubber stops and shock absorbers.
Steering	Worm-and-roller type and divided tie rod. Hydraulic steering damper. Deep Dish steering wheel with telescopic steering column. Turning circle approx 36 ft (11m) diameter, 2.6 turns of steering wheel from lock to lock.
Doors	2 doors each 37.4 inches wide and can be locked from inside or out.
Windows	Tempered body safety glass.
Windshield	Double thick outer layer safety glass.
Seats	Two Bucket in front, adjustable 7 positions. Backrest with built-in headrest, adjustable in 4 positions, locks automatically to prevent them from tilting forward.
Heating/Defrosting System	5 outlets at windshield, 2 opening at foot level in front and 2 in rear.
Fresh-air ventilation System	2 Fresh air vents at the windshield with operating knobs on dashboard.
Brakes	Dual hydraulic foot brake system operating on front and rear wheels. Mechanical handbrake operating on rear wheels.
Toe-In	.07 to .21 Inch (1.8 to 5.4mm) unladed
Chamber	30'+- 20' unladed
Wheelbase	94.5 In. (2400 mm)
Track at Front	51.6 In. (1310 mm)
Track at Rear	53.3 In. (1350 mm)
Wheels	4.1 x 15 In. safety rim wheel
Length (Convertible)	158.6 In. (4030 mm)
Width (Convertible)	61.0 In. (1550 mm)
Height (Convertible)	59.1 In. (1500 mm)
Ground clearance (Convert.)	5.9 In. (150 mm)
Weight Unladen (Convertible)	1918 lbs. (870 kg)
Permissible load	794 lbs. (360 kg)
Gross vehicle weight (Convertible)	2712 lbs. (1230 kg)
Permissible Front axle load	1102 lbs. (500 kg)
Permissible Rear axle load	1631 lbs. (740 kg)
Trailer	880 lbs. (400 kg)
Voltage	12 Volts Negative Ground, Generator Charging System
Battery	45 Ah
Starter	0.7 b. h. p.
Generator	Max 360 watts, early cut in
Fan Belt Deflection	0.5" Midpoint between the two Pulleys
Clearance Between back of shroud fan, and fan cover	Add or remove shims to obtain .06" - .07" gap
V Belt Size	9.1 or 9.5 X 900

## SPECIFICATIONS Type 1, Model Year 1970 - (Continued 3 of 3)

Fuel Tank	10.6 U. S. Gal. (40 Liters, 8.8 Imp gal)
Engine Oil	5.3 U. S. Pints SAE 30 (2.5 Liters, 4.4 Imp pints)
Transmission and final drive	5.3 U. S. Pints SAE 90 (2.5 Liters, 4.4 Imp pints)
Brake System	0.53 U. S. Pints (0.25 Liters)
Oil bath air cleaner	0.8 U. S. Pints
Windshield washer	3.6 U. S. Pints
Luggage Capacity	Rear 5 Cu. Ft. Rear 5 Cu. Ft.
Maximum and Cruising Speed	81 mph (130 km/h)
Acceleration Time (0 - 50mph)	12.5 Seconds
Climbing ability (Convertible)	1st. gear 45.5% grade; 2nd. gear 24%; 3rd 13.5%; 4th gear 8%

### General Service Interval

	<u>(Use)</u> <u>Classic Car Viewpoint</u>	<u>Original Manufacture</u> <u>Recommendation</u>
<b>Change Oil</b>	<b>1,000 Miles or 6 Months</b>	Every 2,000 Miles
<b>Oil Type (Preferred)</b>	<b>Quaker State HD 30 Wt.</b>	<b>Quaker State HD 30 Wt.</b>
<b>Oil Type (Alternate)</b>	<b>HD 10-30 Wt.</b>	
<b>Grease Job</b>	<b>1,000 Miles or 6 Months</b>	Every 2,000 Miles
<b>Air Filter</b>	<b>2,000 Miles or Yearly</b>	Every 3,000 Miles
<b>Valves Adjusted</b>	<b>1,500 Miles or every Year</b>	Every 3,000 Miles
<b>Spark Plugs</b>	<b>Every 5,000 Miles</b>	Every 10,000 Miles
<b>Points</b>	<b>Every 5,000 Miles</b>	Every 10,000 Miles
<b>Timing</b>	<b>Every 2,500 Miles</b>	Every 5,000 Miles
<b>Tires Rotated</b>	<b>Every 2,000 Miles</b>	Every 4,000 Miles
<b>Wheel Balanced</b>	<b>Every 6,000 Miles</b>	Every 12,000 Miles
<b>Alignment</b>	<b>Every 5,000 Miles</b>	Every 10,000 Miles
<b>Trans Axle Fluid</b>	<b>Every 15,000 Miles</b>	Every 30,000 Miles
<b>Wheel Bearing Repacked</b>	<b>Every 10,000 Miles</b>	Every 20,000 Miles
<b>Wax</b>	<b>Once a Year</b>	



Kids, **USE** this book for service



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Alignment Specification	
Caster (Degrees)	3.33 +- 1 or (3 -5/16 to +- 1)
Caster Cross Tol.	0 +- 0
Camber (Degrees)	0.5 +- .33 or (1/2 to 5/16)
Camber Cross Tol.	0 +- 1/2
Front Toe (Degrees)	0.25 +- 0.13 or 1/4" +- 1/8"
Front Toe (Inches)	0.13 +- 0.06" or 1/8" +- 1/16"
Turning Angle	20.0/18.7 +1 .5

STANDARD WRENCH CONVERSION CHART	
Bolt Size	Wrench
1/8"	5/16
3/16"	3/8
1/4"	7/16
5/16"	1/2
3/8"	9/16
7/16"	5/8
1/2"	3/4
9/16"	13/16
5/8"	15/16
3/4"	1-1/8
7/8"	1-5/16
1"	1-1/2

**Vehicle Identification VW**

**YEAR DATES MODEL CHASIS NUMBER ENGINE ENGINE NUMBER**  
**FROM - THRU CYL. C.C. FROM - THRU**

**TYPE 1 - CONVERTIBLE**

1954	1/54-12/54	ALL	575 415	781 883	4	1200(36)	695 282	945 525
1955	1/55-7/55	ALL	781 884	929 745	4	1200(36)	945 526	1 120 614
1956	8/55-7/56	ALL	929 746	1 394 118	4	1200(36)	1 120 615	1 678 208
1957	8/56-7/57	ALL	1 394 119	1 600 439	4	1200(36)	1 678 209	1 937 449
1958	8/57-7/58	ALL	1 600 440	1 774 680	4	1200(36)	1 937 450	2 156 321
1959	8/58-7/59	ALL	1 774 681	2 528 667	4	1200(36)	2 156 322	3 072 319
1960	8/59-7/60	ALL	2 528 668	3 192 506	4	1200(36)	3 072 320	3 912 903
1961	8/60-7/61	ALL	3 192 507	4 010 994	4	1200(40)	3 912 904	3 924 022
1962	8/61-7/62	ALL	4 010 995	4 846 835	4	1200(40)	3 924 023	3 942 914
1963	8/62-7/63	ALL	4 846 836	5 677 118	4	1200(40)	3 942 915	3 959 303
1964	8/63-7/64	ALL	5 677 119	6 502 399	4	1200(40)	3 959 304	3 972 440
1965	8/64-7/65	ALL	155 000 001	155 999 000	4	1200(40)	3 972 441	4 050 000
1966	8/65-7/66	ALL	156 000 001	156 1021 300	4	1300	F 000 0001	F 094 0716
1967	8/66-7/67	ALL	157 000 001	157 999 000	4	1500	H 0 204 001	H 0 874 199
1968	8/67-7/68	ALL	158 000 001	158 1016 100	4	1500	H 5 000 001	H 5 414 585
1969	8/68-7/69	ALL	159 000 001	159 1200 000	4	1500	H 5 414 586	H 5 900 000
1970	8/69-7/70	ALL	150 2000 001	150 3100 000	4	1600	B 6 000 001	B 6 600 000

**MNB 1970**  
**Purchased**  
**5-21-1970**  
**\$2426.69**

**1502756289**



**B 6 326 958**



VW Model Numbers			
Even numbers are right hand drive and the odd numbers are left hand drive			
Model 111	Standard Beetle Sedan, LHD	Model 151	Beetle Karmann Convertible, LHD MNB
Model 113	Deluxe Export Sedan, LHD	Model 141	Karmann Ghia Convertible, LHD
Model 115	Cloth Sunroof Sedan thru 1963, LHD	Model 143	Karmann Ghia Coupe, LHD
Model 117	Steel Sunroof Sedan from 1964, LHD	Model 181	Thing (or Safari)

## Torque Tightening, Bolt and Wrench Size Specifications

Location	Designation	Size x Thread x Length	Class	Lbs -ft	Mkg	Wrench Size
<b>Body Outside</b>						
Running Board	Hex Head Bolt	M6 x 1.00 x 15				10mm
Running Board Fender	Hex Head Bolt	M8 x 1.25 x 20				13mm
Bumper Front	Carriage Bolt	M8 x 1.25 x 15				13mm
Bumper Bracket	Hex Head Bolt	M8 x 1.25 x 18				13mm
Wiper Blade	Hex Head Nut					13mm
Fender Bolt	Hex Head Bolt	M8 x 1.25 x 18				13mm
Tag Bracket	Hex Head Bolt	M6 x 1.00 x 15				10mm
Tag Light Bracket	Hex Head Bolt	M5 x 0.80 x 20				8mm
Tag Light Lens	Phillips Head	M4 x 0.75 x 15				Phillips
Engine Deck Lid	Hex Head Bolt	M6 x 1.00 x 20				10mm
Hood Handle/Lock	Hex Head Bolt	M6 x 1.00 x 30				10mm
Hood Hinge	Hex Head Bolt	M8 x 1.25 x 25				13mm
Floor Pan (Std)	Hex Head Bolt	M8 x 1.25 x 45				13mm
Floor Pan (Large)	Hex Head Bolt	M10 x 1.50 x 45				17mm
Bumper Bolts		M8 x1.25 x15 & M8 x1.25 x31				
Door Handle	Phillips Head	M6 x 1.00 x 10				Phillips
Door Alignment	Phillips Head	M6 x 1.00 x 15				Phillips
Door Latch (door)	Phillips Head	M6 x 1.00 x 10				Phillips
Door Latch (body)	Phillips Head	M6 x 1.00 x 10				Phillips
Tail Light Reflector	Hex Head Bolt	M6 x 1.00 x 15 & Phillips Screw				10mm
<b>Body Inside</b>						
Dash Under	Sheet Metal	M4 x 1.75 x 10				Phillips
Dash Top Side	Sheet Metal	M4 x 1.50 x 15				Phillips
Rear Seat Stop	Sheet Metal	M6 x 1.75 x 15				Phillips
Window Frame	Hex Head Bolt	M6 x 1.00 x 30				10mm
Window Guides	Hex Head Nut	M8 x 1.25				13mm
Gearshift Housing/ Bonder Rubber Mounting	Hex Nut	M10 x 1.5 x	8 G	25.0	3.5	
Door Handle Inside	Phillips Head	M5 x 0.90 x 5				Phillips
<b>Pedal assembly</b>						
Pedal bracket to frame	Hex Head Bolt	M10 x 1.50 x 30		32		17mm
Pedal stop to Pans				18		
Brake Rod		M10 x 1.25				15mm
Clutch & Brake Stop	Hex Head Bolt	M14 x 1.25 x 25				13mm

### Torque Tightening, Bolt and Wrench Size Specifications - (Continued 2 of 8)

Location	Designation	Size x Thread x Length	Class	Lbs -ft	Mkg	Wrench Size
<b>Engine</b>						
Engine Mounting (2)		M10 x 1.5 x 70				
Starter Bolt	Half Moon Head	M10 x     x 110				
Engine Tin Screws		M6 x     x12				
Connecting rod nut	Nut	M9 x 1.0	8G	24	3- 3.5	
Connecting rod cap screw		M9 x 1.0		32		
Head Studs		M8 x 1.25 x				
Crankcase nut	nut	M8	5S	14	2.0	
Crankcase seal nut	Sealing nut	M12 x 1.5	35S20K	18	2.5	
Cylinder head nut	nut	M18 x 8		8		
Cylinder head nut	nut	M23 x 10		10		
Cylinder head		M10	35S20KV	23	3.2	
Rocker shaft nut		M8	8G	16	2-2.5	
Heat Exchanger at head		M8		14		
Muffler Clamp bolts		M6		7		
Tailpipe Clamps	U Bolts	M6 x 1.00		7		10mm
Intake manifold nut		M8		14		
Preheat-flange bolt		M6		7		10mm
Oil Pump nut		M8		14	2.0	
Oil Pump nut		M6		9		10mm
Oil Drain plug	Plug	M14 x 1.5	9S20K	25	3.5	
Oil Strainer Cap nut		M6		5	0.7	10mm
Oil cooler nut		M6		5		10mm
Oil filler gland nut				40		
Flywheel Gland nut		M28 x 1.5		217	35.0	30mm
Fly Wheel Nut inside				45		
Clutch to Fly Wheel	Bolt	M8 x 1.5	8G	18	2.5	
Sparkplug	Sparkplug	M14 x 1.25		25	3-4.0	
Engine to trans nut	nut	M10		22	3.0	
Cross member bolt		M8		18		
Cross member bolt		M10		29		16mm
Generator pulley nut		M12 x 1.5		43		
Fan nut		M12 x 1.5		43		
Crankshaft pulley nut	Bolt	M20 x 1.5		32		
Cross member to body		M8		18		
Fan/Crankshaft pulley		M20 x 1.5		100		
Clutch Bolts		M8 x     x20		10.9		

<b>Torque Tightening, Bolt and Wrench Size Specifications - (Continued 3 of 8)</b>						
<b>Location</b>	<b>Designation</b>	<b>Size x Thread x Length</b>	<b>Class</b>	<b>Lbs -ft</b>	<b>Mkg</b>	<b>Wrench Size</b>
<b>Engine (Continued)</b>						
Clutch Pressure Plate Bolts		M8 x 1.5 x 25				
<b>Front Axle &amp; Steering</b>						
Front Beam to pan bolts				36		
Body to beam bolts				14		
Shock to beam side plate		M10		14		13mm
Shock to beam side plate		M12		25		
Shock to lower torsion arm				25		
Steering damper to front beam bolt				32		
Steering damper to tie rod				18		
Ball Joint or Link Pin		M12 x 1.5 x 90				
Tie rod to castle nut				18		
Tie rod nut				18		
Clamp for tie rod bolt				11		
Lock nut for torsion set screw				36		
Wheel bearing clamp screw				10		
Steering ball joint to knuckle				51		
Steering box to front beam				22		
Steering coupler to worm shaft				18		
Pitman arm to shaft bolt				51		
Locknut for pitman arm adj. screw				18		
Lock nut for worm spindle adj. screw				42		

<b>Torque Tightening, Bolt and Wrench Size Specifications - (Continued 4 of 8)</b>						
<b>Location</b>	<b>Designation</b>	<b>Size x Thread x Length</b>	<b>Class</b>	<b>Lbs -ft</b>	<b>Mkg</b>	<b>Wrench Size</b>
<b>Front Axle &amp; Steering (Continued)</b>						
Steering box housing cover bolt				18		
Canceling ring to steering wheel				3.5		
Steering wheel nut				36		
Steering Wheel Nut	Hex Head Bolt			20		27mm
Steering column to dash bolts				7		
Column switch to attach plate				7		
Column switch clamp to housing				7		
Steering coupling flange to disc				11		
Column to couple flange bolt				11		
<b>Transaxle</b>						
Drive pinion round nut ball bearing				87		
Drive pinion round nut roller bearing				144		
Pinion retainer nut				36		
Pinion nut				43		
Drive shaft nut				43		
Reverse lever guide bolt				14		
Selector fork bolt				18		
Gearshift housing nuts				11		
Ring gear bolts				43		
Final drive cover nuts				22		
Axle tube retainer nuts				14		
Rear wheel bearing retainer nut				43		
Rear axle shaft nut				217		



<b>Torque Tightening, Bolt and Wrench Size Specifications - (Continued 5 of 8)</b>						
<b>Location</b>	<b>Designation</b>	<b>Size x Thread x Length</b>	<b>Class</b>	<b>Lbs -ft</b>	<b>Mkg</b>	<b>Wrench Size</b>
<b>Transaxle (Continued)</b>						
Transmission Mount/ Frame Fork	Fitted Screw	M18 x 1.5 x	8 G	167	23	
Gear Oil drain plug				14		
Gear Oil filler plug				14		
CV Joint Bolts		M8 x x46				
Diagonal Arm/ Spring Plate	Hex Head Screw	M12 x 1.5 x	10 K	87	12	
Diagonal Arm/ Frame Mount	Fitted Screw	M14 x 1.5 x	C 45	87	12	
Spring Plate Cover/ Frame Cross Tube	Hex Head Screw	M10 x 1.5 x	8 G	22	3.0	13mm
Shock Absorber/ Frame Arm	Hex Head Screw	M12 x 1.5 x	6 G	44	6.0	
Shock Absorber/ Bearing Housing	Hex Head Screw	M12 x 1.5 x	8 G	51	7.0	
Diagonal Arm/ Spring Plate	Hex Head Screw	M12 x 1.5 x	10 K	87	12	
One-Way Clutch Support Tube/ Converter Housing	Socket Head Screw	M6 x 1.0 x	10 K	11.0	1.5	10mm
Clutch/Carrier Plate	12-point Socket Head Screw	M6 x 1.0 x	10 K	11.0	1.5	10mm
AFT Feed Pipe/ Transmission	Union	M12 x 1.5 x		7.0	1.0	
AFT Return Pipe/ Transmission	Union	M14 x 1.5 x		22 - 29	3 - 4	
Clamp Screw/ Clutch Lever	Hex Head Screw	M8 x 1.25 x	8 G	18	2.5	
Constant Velocity Joint/ Flange	Socket Head Screw	M8 x 1.25 x	10 K	25	3.5	
Clutch Housing	Temperature Switch	M14 x 1.5 x	GD-ZuA14	18	2.5	
Transmission Case	Selector Switch	M14 x 1.5 x	GD-ZuA14	18	2.5	
Gearshift Housing	Neutral Safety Switch	M14 x 1.5 x	GD-ZuA14	18	2.5	
Converter/Drive Plate	12-point Socket Head Screw	M8 x 1.25 x	8 G	18	25	

<b>Torque Tightening, Bolt and Wrench Size Specifications - (Continued 6 of 8)</b>						
<b>Location</b>	<b>Designation</b>	<b>Size x Thread x Length</b>	<b>Class</b>	<b>Lbs -ft</b>	<b>Mkg</b>	<b>Wrench Size</b>
<b>Transaxle (Continued)</b>						
Gearbox/ Transmission Case	Retaining Ring	M80 x 1.0	Cq 35	101- 115	14-16	
Lock Plate/ Retaining Ring	Tapping Screw	M4.8	Cq 5K	7.0	1.0	
Gear Carrier/ Transmission Case	Hex Nut	M8 x 1.25 x	6 G	14	2.0	
Lock Plate/ Bearing Ring	Fillister Head Screw	M7 x 1.25 x	6 G	7.0	1.0	
Gearshift Housing/ Transmission Case	Hex Nut	M7 x 1.0 x	6 G	11.0	1.5	
Converter Housing/ Transmission Case	Hex Nut	M8 x 1.25 x	6 G	14.0	2.0	
Cover/ Transmission case	Fillister Head Screw	M7 x 1.25 x	6 S	7.0	1.0	
Converter Housing/ Bonder Rubber Mounting	Hex Nut	M8 x 1.25 x	6 G	14.0	2.0	
Transmission Mounting/ Bonder Rubber Mounting	Hex Nut	M8 x 1.25 x	6 G	14.0	2.0	
Shift Fork/ Shift Rod	Hex Head Screw	M8 x 1.25 x	C 45 KN	18.0	2.5	
Bearing Lock Screw	Hex Head Screw	M8 x 1.25 x	5 S	7.0	1.0	
Pinion	Round Nut	M35 x 1.5 x	Cq 35	130- 145	18-20	
Ring Gear	Hex Head Screw	M10 x 1.5 x	10 K	32	4.5	13mm
<b>Master cylinder</b>						
Stop screw in housing bolt				7		
Residual pressure valve to housing				14		
Brake light switch				14		
Master cylinder to frame bolts				18		
Brake line to master cylinder				18		

**Torque Tightening, Bolt and Wrench Size Specifications - (Continued 7 of 8)**

<b>Location</b>	<b>Designation</b>	<b>Size x Thread x Length</b>	<b>Class</b>	<b>Lbs -ft</b>	<b>Mkg</b>	<b>Wrench Size</b>
<b>Front Brakes</b>						
Splash shield to steering knuckle bolts				7		
Wheel cylinder to backing plate				18		
Backing plate bolt				36		
Bleeder valve				9		
Clamp nut screws				9		
Hose to wheel cylinder/caliper				14		
Wheel Lug Bolts (4)	Hex Head Bolt	M14 x1.5 x 18		110		19 mm or 3/4"
<b>Rear Brakes</b>						
Wheel cylinder to backing plate				22		
Bearing housing bolts				43		
Brake drum to axle bolt				253		
Rear Wheel Axle Nut				217		
Bleeder valve				9		
Brake Drum/ Rear Axle Shaft	Slotted Nut	M24 x 1.5 x	C 45 KV	217	30	
<b>Trunk Area</b>						
Hood to Bracket	Hex Head Bolt	M8 x 1.25 x 15				13mm
Ash Tray Cabinet	Hex Head Bolt	M4 x 0.75 x 10				7mm
<b>Convertible Top</b>						
Frame to Body	Hex Head Bolt	M8 x 1.25 x 25				13mm
Bow to Frame	Phillips Head Bolt Phillips Head Wood Screw	#10 - 24 x 2.5" #10 x 1" Long				#10 Phillips
Quarter Facing	Phillips Head Wood Screw	#10 x 1" Long				Phillips

**Torque Tightening, Bolt and Wrench Size Specifications - (Continued 8 of 8)**

Location	Designation	Size x Thread x Length	Class	Lbs -ft	Mkg	Wrench Size
<b>Doors</b>						
Window Regulator	Hex Head Bolt	M6 x 1.00 x				10mm
Vent Window Frame Top	Hex Head Bolt	M6 x 1.00 x				10mm
Vent Window Frame Bot.	Hex Head Bolt	M8 x 1.25 x				13mm
Vent Window Glass to Body	Hex Head Bolt	M5 x 0.90 x				8mm
Rear Guide Bar Top	Hex Head Bolt	M6 x 1.00 x				10mm
Rear Guide Bar Bottom	Hex Head Bolt	M8 x 1.25 x				13mm
Striker Plate Door	Phillips	M6 x 1.00 x 15				Phillips
Striker Plate Body	Phillips	M6 x 1.00 x 15				Phillips
Door Handle Exterior	Phillips	M6 x 1.00 x 10				Phillips
Door Alignment	Phillips	M6 x 1.00 x 15				Phillips


Standard Metric Sizes: M3 x 0.5, M4 x 0.7, M5 x 0.8, M6 x 1.0, M7 x 1.0, M8 x 1.0, M8 x 1.25, M10 x 1.0, M10 x 1.25, M10 x 1.5, M12 x 1.25, M12 x 1.5, M12 x 1.75, M14 x 1.5, M14 x 2.0, M16 x 1.5, M16 x 2.0, M20 x 1.5, M20 x 2.5, M24 x 2.0, M24 x 3.0.

<b>METRIC WRENCH CONVERSION CHART</b>	
<b>Bolt Size</b>	<b>Wrench (ANSI)</b>
4	7
5	8
6	10
7	-
8	13
10	16
12	18
14	21
16	24
18	-
20	30

<b>STANDARD WRENCH CONVERSION CHART</b>	
<b>Bolt Size</b>	<b>Wrench</b>
#6	1/4"
#8	1/4"
#10	5/16"
#12	5/16"
1/8"	5/16"
3/16"	3/8"
1/4"	7/16" or 3/8"
5/16"	1/2"
3/8"	9/16"
7/16"	5/8"
1/2"	3/4"
9/16"	13/16"
5/8"	15/16"
3/4"	1 1/8"
7/8"	1-5/16"
1"	1-1/2"
1-1/8"	1-11/16"
1-1/4"	1-7/8"

<b>Wire Size Conversion Table German mm to USA AWG</b>		
<b>mm<sup>2</sup></b>	<b>AWG Standard Size</b>	<b>AWG Metric Equivalent</b>
0.50	20	0.518
0.85	18	0.823
1.00	16	1.31
1.50		
2.00	14	2.08
2.50		
3.00	12	3.31
4.00		
5.00	10	5.26
6.00		
8.00	8	8.37
10.00		
17.00	6	13.3
25.00	4	21.2
34.00	2	33.6
43.00	1	42.4
56.00	0	53.5
70.00	00	67.4
88.00	000	85.0

<b>CONVERSION TABLE</b>				
<b>Metric to US</b>			<b>US to Metric</b>	
<b>Metric (mm)</b>	<b>US Nearest 32nd. Inch</b>		<b>US (Inches)</b>	<b>Metric (mm)</b>
2	3/32		1/16	1.6
2.5	3/32		1/8	3.2
3	1/8		3/16	4.8
4	5/32		1/4	6.4
5	3/16		5/16	7.9
6	1/4		3/8	9.5
8	5/16		7/16	11
10	13/32		1/2	13
12	15/32		9/16	14
14	9/16		5/8	16
16	5/8		11/16	17
18	23/32		3/4	19
20	25/32		13/16	21
25	1		7/8	22
30	1-3/16		15/16	24
35	1-3/8		1	25
40	1-9/16		1-1/8	29
45	1-3/4		1-1/4	32
50	2		1-3/8	35
55	2-3/16		1-1/2	38
60	2-3/8		1-5/8	41
65	2-9/16		1-3/4	45
70	2-3/4		1-7/8	48
75	2-15/16		2	51
80	3-1/8		2-1/4	57
85	3-3/8		2-1/2	64
90	3-9/16		2-3/4	70
95	3-3/4		3	76
100	3-15/16		3-1/4	83

<b>Part Numbers</b>	
Ignition Wires Part No.	09 001
Coil Part No.	00 015 (Blue Coil: 00 012)
Distributor Cap Part No.	03 010
Rotor Part No.	04 033
Condenser Part No.	02 007
Points Part No.	01 013
Vacuum Can	07 024
Sealed Beam Headlight	#6012 VW Part No. 111 941 261 A
Front Turn Signal Bulb	#1034 VW Part No. N 17 738 2 Now 1157 double connector
Parking Lamp Bulb	#1034 VW Part No. N 17 738 2 Now 1157 double connector
Rear Turn Signal Bulb	#1073 VW Part No. N 17 732 2 Now 30W single connector
Stop/Tail Light Bulb	#1034 VW Part No. N 17 738 2 Now 1157 double connector
Back-up Light Bulb	#1073 VW Part No. N 17 733 2 Now 30W single connector
License Lamp Bulb	#89 VW Part No. N 17 719 2
Instrument and Warning	VW Part No. N 17 722 2
Emergency Flasher	VW Part No. N 17 751 2
Interior Light Convertible	VW Part No. N 17 725 2
MNB Accessory Gauges Bulb	600815 V3067020446
	<p>I started adding Lucas Oil Ethanol Fuel Additive January 2012 due to the high content of ethanol in gas today.</p> <p style="text-align: center;">USE: 1 ounce of Fuel Treatment for each 5 gallon of gas</p>

<b><u>VW Spare Parts Storage (Workshop, above Lathe in Plastic Drawers/Boxes)</u></b>	
<b><u>ENGINE Storage Box 1 of 3</u></b>	
VW Accessory Gauges Lights	Package New
Oil Temp Sending Unit	Box, Never used
Tool, Flywheel Lock for removing flywheel	New, Never used
Muffler & Gasket Kit	New, Partial
Generator Brushing Kit	New
Starter Brushing Kit ?	New
Oil Cap	Used
Oil Plug	Used
Brake Reservoir Cap	Used
Oil Strainer Studs Replacement	New
Misc Items	

**VW Spare Parts Storage (Workshop, above Lathe in Plastic Drawers/Boxes) - Continued 2 of 3**

<b><u>ENGINE Storage Box 2 of 3</u></b>	
Oil Change Gasket Set	New
Valve Cover Gasket Set	New
Voltage Regulator	New
Fuel Pump	New
Brake Master Cylinder	Used
Carburetor 30 PICT-3 (Original that came on car)	Used
Carburetor Repair Kit	New
Carburetor Solenoid	New
Gas Filter	New
Fan Belt	New
<b><u>ENGINE Storage Box 3 of 3</u></b>	
Voltage Regulator	Used
Pertronic Electronic Ignition	New
Box VW Fuses	New
Distributor Cap, Rotor	Used, but good Condition
Distributor, New	Not used since not Vacuum Advance
Spark Plugs Wires set - Bosch	New
Spark Plugs Wires set - Bosch	Used
Spark Plug Holder on Engine Tin (2)	New
Oil Plug Strainer	New
Condenser	New
<b><u>INTERIOR Storage Box 1 of 2</u></b>	
Fuse Block with fuses	Used
Windshield Wipers	Used
Door Handles, Interior	Used
Door Lock Buttons	New
Fresh Air Vent Knobs Inserts (2)	New
<b><u>INTERIOR Storage Box 2 of 2</u></b>	
Radio, Original	Used
Radio Wiring Connectors	Used with Neil's Radio
Radio Connections Misc Parts, including old aerial	Used
Door Panels Connectors, Female Rubber Connectors, in pill box	New
Door Panels Connectors, Male Metal Connectors, in pill box	New
Door Check Rod	New
Fuse Box Plastic Cover	Used
Seat Door Lever Latches	Original came on Car
Door Panel/Knob Spring Set	New
Visor White Plastic Connector, only 1	New
Foot Pedals Covers	Used
Speedometer Ring	Used



**VW Spare Parts Storage (Workshop, above Lathe in Plastic Drawers/Boxes) - Continued 3 of 3**

<b>EXTERIOR Storage Box 1 of 1</b>	
Tail Light Lenses	Used
Side Marker Lenses	Used
Fender Webbing Set	New
Floor Pan Bolts in pill box	Used
Floor Pan Washer in pill box	Used
Covers Stainless Steel for Convertible Top Frame Ends	Used
Package, Door Collar Knob, Door Wedge, Window Stop, Engine Compartment Seal, Door Switch Seal, Hood Handle Seal, Door Oil Plug Seals, Door Handle Seal, Taillight Screw Long	New

**VW Tools in Spare Tire Carrier in VW Trunk**

 <p><b>Spare Tire Tool Carrier</b></p>	<ol style="list-style-type: none"> <li>1. 6" Crescent wrench</li> <li>2. Long Nose Pliers</li> <li>3. 7 mm Open End Wrench &amp; 8-12mm</li> <li>4. 8 mm &amp; 9 mm Open End Wrench</li> <li>5. 10 mm &amp; 11 mm Open End Wrench</li> <li>6. 12 mm &amp; 13 mm Open End Wrench</li> <li>7. 14mm &amp; 15mm Open End Wrench</li> <li>8. 16mm &amp; 17mm Open End Wrench</li> <li>9. 19mm &amp; 20mm Open End Wrench</li> <li>10. 36mm &amp; 21mm Open End Wrench &amp; 10" Crescent</li> </ol>
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**VW Spare Parts & Supplies in Tool Bag in VW Trunk**

Accelerator Cable, Clutch Cable	New	Electrical Tape, Masking Tape	
Fan Belt, Quart Oil	New	Hub Cap Puller, Oil Plug Gasket	
Coil, Distributor Cap, Condenser	New	AU Duct Tape, Towel	
Spark Plugs (4), Ignition Points	New	#10 Black Solid Wire	
Fuses, Light Bulbs, Sandpaper, Pencil	New	#12 Yellow Strained Wire	
Valve Cover Gasket (2)	New	Fuel Hose	
Assorted Wire Terminals (Pill Box)	New	Brake Hose, Brake Fluid	
Assorted Cable Clamps	New	Red Tube filled with Light Bulbs	

**VW Tools in Tool Bag in VW Trunk**

1/8" x 2"; 3/16" x 4"; 3/16" x 6" Flat Head Screwdriver	Tire Air Gauge
P2 x 4" & 6" Philips Screwdriver	Leatherman Multi-Tool & Knife
Pliers, Standard; Cutters; P, Nose; Vice Grip Craftsman	Gloves Rubber & Gloves Automobile
Punch 3/8", Punch All	Small Wire Brush, Tooth Brush
Timing Light; Dwell Thach Meter; Volt-Ohms Meter	Safety Glasses & Malcolm Reading Glasses
Hammer; 16" Wood Dowel	Flashlight (Small) & (Large)
1/4" Drive - Socket, Ext., 5,6,7,8,9,10,11,12,13,14 mm	Remote Starter Switch
3/8" Drive - Socket, Ext., 10,11,12,13,14, 15, 16, 17, 18 mm	Electrical Circuit Tester
1/4" Driver & Adapters	Spark Plug Circuit Tester
Magnet Driver, Air Compressor	12 Volt Light Tester, 10' Retractable Test Leads
Feeler Gauge & Spark Plug Gauge	WD-40 Mini Can, Car Duster
Metric Hex-Key Set	Razor Blade Knife, Standard Razor Blade

### Rear Seat Area

- 2 Coats POR15
- 2 Coats Truck Bed Material

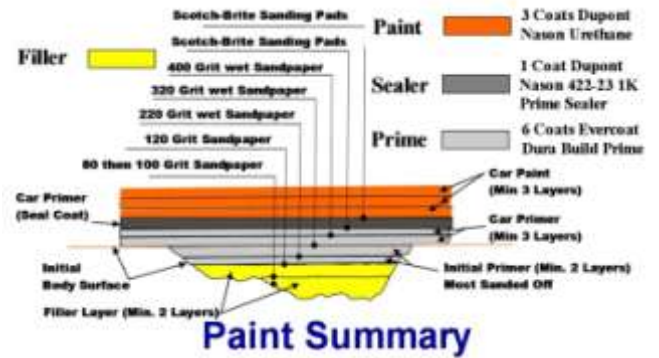
### Floor Pan Top

- 3 Coats POR15
- 2 Coats Truck Bed Material

### Floor Pan Bottom

- 3 Coats POR15
- 1 Undercoat Material

## Undercoat Summary



Equipment or software used to produce this book and video:

Still Images - Canon PowerShot SD780IS Elph camera and processed with Microsoft Digital Image Suite 2006 Editor Software

Video Images - Canon HD Vixia HF S20 Video Camera and processed with Vegas Movie Studio HD Platinum 10.0, and DVD's Burned with DVD Architect Studio 5.0

Word Processing Software - Microsoft Office Word 2007