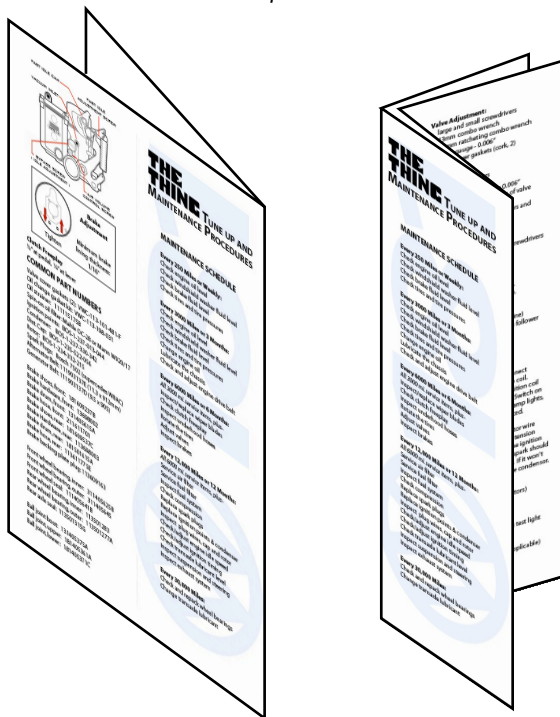


This is how the cheat sheet should look as it comes out of your inkjet printer.



Fold the page in half as indicated.

Fold it again, and your done. It's now conveniently sized for the glove box, tool roll, or tool box. A judicious use of glue stick on the unprinted side will keep it from unfolding. Anal-retentives like me will have it laminated.

THE THING TUNE UP AND MAINTENANCE PROCEDURES CHEAT SHEET INSTRUCTIONS

This cheat sheet is intended to be a ready reference for those who like to work on their own VWs, but don't do it so often that they have every spec and procedure memorized. It is not meant to replace a shop manual. If you have not performed a given procedure with the benefit of a real manual or knowledgeable supervision, don't think the information here is enough to get you through. The cheat sheet is a mnemonic device – not a training tool.

The specifications and part numbers given are for stock or stockish setups. If your car has a lot of wiz-bang custom mods, the info given might not be appropriate.

So much for the disclaimer.

There is a lot of information on the sheet. I tried to format it so that it could be printed out by any inkjet printer. The problem is that some printers will print all the way to the edge of the page, and some won't. If your printer supports borderless printing, please select that option in your print dialog. If your printer doesn't support borderless printing, maybe the page will be cropped when you print it. Maybe it won't. It all depends on how close to the edge of the page your particular printer is capable of printing.

Happy wrenching!

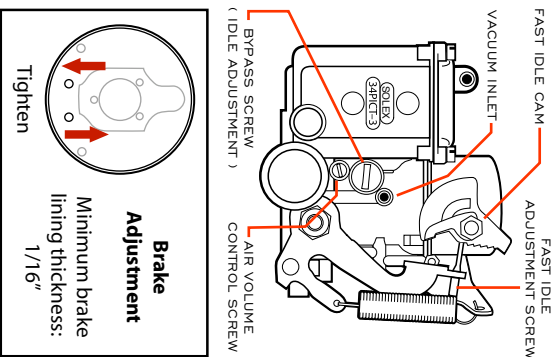
REFERENCES:

Rob and Dave's Aircooled Volkswagen Pages
<http://www.vw-resource.com/>

Bug Me Video Series
<http://www.bugmevideo.com/>

The Bentley Manual, or more properly:
Volkswagen Official Service Manual
Type 1 1970 through 1979
from Bentley Publishers

How to Keep Your Volkswagen Alive
written by John Muir



COMMON PART NUMBERS

Valve cover gaskets (2): VWC-113-101-481-F
Oil change gasket kit: VWC-113-198-031
Oil strainer: 111115175B
Ignition points: BOS-1-237-013-044
Condenser: BOS-1-237-330-342
Dist. Cap: BOS-1-235-522-056
Rotor: BOS-1-234-332-215
Spark Plugs: Bosch W145T1, or W8AC
Alternator Belt: 111903137E (11.3 x 912mm)
Generator Belt: 111903137D (9.5 x 905)

Brake shoes, front: 181609237B
Brake hardware, front: 13698002
Brake drum, front: 131405615A
Brake hose, front: 211611701
Brake shoes, rear: 181609537C
Brake Hardware, rear: 113698003
Brake drum, rear: 181501615A
Brake hose, rear: 113611775E
Brake backing plate plug: 113609163

Front wheel bearing, inner: 311405625B
Front wheel bearing, outer: 311405645
Front wheel seal: 111405641B
Rear wheel bearing, inner: 113501283
Rear wheel bearing, outer: 113501277A
Rear axle seal: 113501315G

Ball joint boot: 131405375A
Ball joint, upper: 181405361A
Ball joint, lower: 181405371C

THE THING TUNE UP AND MAINTENANCE PROCEDURES

MAINTENANCE SCHEDULE

Every 250 Miles or Weekly:

Check engine oil level
Check windshield washer fluid level
Check brake fluid level
Check tires and tire pressures

Every 3000 Miles or 3 Months:

Check engine oil level
Check windshield washer fluid level
Check brake fluid level
Check tires and tire pressures
Change engine oil
Lubricate the chassis
Check and adjust engine drive belt

Every 6000 Miles or 6 Months:

All 3000 mi. service items, plus-
Inspect/replace wiper blades
Check clutch freplay
Inspect underhood hoses
Rotate the tires
Adjust valves
Inspect brakes

Every 12,000 Miles or 12 Months:

All 6000 mi. service items, plus-
Service air filter
Service fuel system
Check compression
Replace spark plugs
Replace ignition points & condenser
Inspect plug wires, cap and rotor
Check/adjust engine idle speed
Check/adjust ignition timing
Check transaxle lubricant level
Inspect suspension and steering
Inspect exhaust system

Every 30,000 Miles:

Check and repack wheel bearings
Change transaxle lubricant

TUNE-UP/SERVICE WORKFLOW

Warm Engine

Drain Oil

Cold Engine

Spark plug removal, analysis

Compression test

Valve adjustment

Cap/Rotor/Condenser check/replace

Points gapped

Install gapped spark plugs

Install strainer, gaskets, plate

Refill with oil

Warm engine

Set dwell angle

Check intake manifold air leakage

Adjust idle to 900 RPM

Static timing adjustment

Stroboscopic timing adjustment

Service Air Filter

Service Fuel Filter

Check and adjust drive belt

Inspect/ adjust brakes

Check brake fluid level

Check and adjust clutch free play

Lubricate Chassis

Inspect hoses

Transaxle Lubricant

Wheel bearing repack

PROCEDURE NOTES:

Oil Change:

- 10 mm socket wrench
 - Oil capacity: 2.5 liters
 - Oil change gasket kit
 - Solvent (to clean strainer)
- Engine warm

Compression Test:

- Spark plug socket
 - Long-handle 3/8 socket driver
 - Compression tester
 - Remote start switch
- Remove spark plugs.
Insert compression tester.
Crank for six seconds.
100 p.s.i. +, 5 p.s.i. variance

Spark Plugs:

- Spark plugs, x 4
- Gapping tool

Gap: .0028" for points, (0.040 for CDI)

Install with new gasket and terminal nut REMOVED

Firing order: 1 - 4 - 3 - 2

Valve Adjustment (Cold Engine):

- large and small screwdrivers
- 13mm combo wrench
- 19 mm ratcheting combo wrench
- feeler gauge - 0.006"
- Valve cover gaskets (cork, 2)
- grease

Remove valve covers

Clean gasket surfaces

Adjust valve clearance to 0.006"

Adjust cylinders in this order: 1-2-3-4

Turn crankshaft pulley CCW 180° cylinder

Thinly coat mating surfaces of valve

cover gaskets with grease.

Install gaskets into valve covers and

replace valve covers.

Start engine. Check for leaks.

Distributor Cap and Rotor:

- med and small flat blade screwdrivers
- feeler gauge
- tach/dwell meter
- ohmmeter
- remote start switch
- Cap: contacts pitted? Replace.
- Rotor: ≤ 10,000 Ω or replace.
- Point gap: 0.016"
- Dwell Angle = 50° ± 2°
- (measured with warm engine)
- remember to lubricate cam follower

Condenser Test:

- small screwdriver, test light
- Remove distributor cap.
- With points fully open, disconnect green wire from distributor to coil.
- Connect test lamp wire to ignition coil terminal and distributor wire. Switch on ignition (do not start). If the lamp lights, the condenser must be replaced.

Reconnect the green distributor wire to the coil. Pull the main high tension wire from the coil, and with the ignition on, turn the engine over. The spark should jump a ¼ inch gap to ground. If it won't jump this distance, replace the condensor.

Ignition Timing:

(only for 009 or SVDA distributors)

Check the following:

- Point gap: 0.016"
- Dwell Angle = 50° ± 2°

Static Timing: 7.5° BTDC using test light

Strobe Light Timing:

Warm Engine

Disconnect/plug vac line (if applicable)

Idle speed: 900 RPM

30° BTDC @ 3500 RPM