



# BMW Cheat Sheet

last edited: May 5th, 2004

These are draft notes, and are a work in progress. Feel free to use them, but you're responsible for all results, good and bad! If you find errors, please tell me, I'm sure that there are some.

## R1100, R1150, R1200 maintenance information

Tire Pressures	Front	Rear (psi / bar)			N-m x .723	Ft.-lb
R1200C	34 / 2.35	36 / 2.5	head bolts	15mm socket	20 N-m +180°	14.5 Ft-lb +180°
R1100S	37 / 2.55	40 / 2.75	(on reassembly)		20 +90°+90°	14.5 +90°+90°
R1150R, GS	38 / 2.6	40 / 2.75	M10 Nut	?	40 N-m	?
R1150RT	40 / 2.75	42 / 2.9	cam cap bolts	T35 torx	15 N-m	? Ft-lb
Engine Oil	4 qts		pinch bolts	6mm allen	21 N-m	15 Ft-lb
Final Drive	250 ml		valve adjust nut	10mm box	10 N-m	8 Ft-lb
Transmission:			front axle	17mm socket	30 N-m	22 Ft-lb
R bikes	850 ml		brake caliper:			
R1200C	1000 ml (850 ml+ 150ml)		integral ABS	8mm allen	30 N-m	22 Ft-lb
850 on center stand, then 150 on the side-stand.			all others	8mm allen	40 N-m	29 Ft-lb
<b>Throttle Sync</b> (make sure that fast idle is off!)			rear wheel bolt	17mm socket	105 N-m	76 Ft-lb
Brass screws all the way in, then 1.5 turns out.			when are brakes mounted with T45's???			
(possibly 2.25 turns for R1100GS and R1100R only)			Poly V Belt	13mm?	20 N-m	14.5 Ft-lb
- Fast Idle Lever cable freeplay at handlebar: 1mm			rear drive drain	19mm socket	? N-m	? Ft-lb
- Throttle lever cable freeplay at handlebar: 1mm			rear drive fill	6mm allen	? N-m	? Ft-lb
- Throttle Body cable freeplay			tranny fill	8mm allen	? N-m	? Ft-lb
- - older single-cable - on right throttle body only: 2mm			tranny drain	8mm allen	? N-m	? Ft-lb
- - newer splitter box - on both throttle bodies: 2mm			engine oil drain	8mm allen	? N-m	? Ft-lb
Adjust to 1150 rpm at idle. (cruiser to 950rpm)						
Adjust right side bowden cable only to even out throttle sync bars while revving around 3500 rpm.						
<b>Valve Clearances</b>	intake	exhaust				
Oilhead R	.15mm/.006"	.30mm/.012"				
rocker endplay	.05-.40mm	.002-.016"				
(ideally .05-.10mm, but can use intake feeler for ease)						
			<b>Ignition Timing</b> (r259 rotates clockwise viewed from front)			
			R12C and R11s need dial indicator for crankshaft position, other models use set pin tool 11 2 650			
			Mo. 2.2 direct to Komet, Mo. 2.4 through MO plug			

## F650 maintenance information

Tire Pressures	Front	Rear (psi / bar)	Valve Clearances	intake	exhaust		
F650	34 / 2.35	36 / 2.5	F650	.1-.15mm	.25-.3mm		
Engine Oil at oil change:						N-m x .723	Ft.-lb
Fill oil to top, ride for 5 minutes, or until completely warmed up, put on center stand, let idle for one minute, then fill to bubble in center of oil level window.			pinch bolts	T45 torx	21 N-m	15 Ft-lb	
Fork Oil:	550ml per side GS Dakar		front axle	8mm allen	45 N-m	35.5 Ft-lb	
	600ml per side GS		rear axle right	24mm socket	100 N-m	72 Ft-lb	
	650ml per side GS factory lowered		rear axle left	19mm wrench	100 N-m	72 Ft-lb	
			chain tensioner	T40 torx	make even on both sides		
			<b>oil change</b>				
			body panels	T25	torx oil overflow top bolt	T30	
			oil drains	6mm overflow	24 mm pan drain		

## K bike maintenance information

<b>Tire Pressures</b>	<b>Front</b>	<b>Rear (psi / bar)</b>		<b>N-m x .723</b>	<b>Ft.-lb</b>
K1200RS, GT	40 / 2.75	42 / 2.9	pinch bolts ?	21 N-m	15 Ft-lb
K1200LT	42 / 2.9	46 / 3.2	front axle ?	30 N-m	22 Ft-lb
Engine Oil:			brake caliper:		
K1100	3.75 qts		integral ABS ?	30 N-m	22 Ft-lb
K1200	3.8 qts		all others ?	40 N-m	29 Ft-lb
Final Drive	250 ml		rear wheel bolt ?	105 N-m	76 Ft-lb
Transmission:					
K1200	600 ml				

## R80 and R100 maintenance information

<b>Tire Pressures</b>	<b>Front</b>	<b>Rear</b>	<b>valve clearances</b>	<b>intake</b>	<b>exhaust</b>
Most airheads	32 / 2.2	34 / 2.35	Airhead R	.006"/.15mm	.008"/.20mm
R100GS, R80GS	34 / 2.35	36 / 2.5	2 12mm wrenches needed		
Engline Oil	2.4 quarts	2.7 with oil cooler	Head bolt	15mm socket	35-39N-m 26-29 ft-lbs
Final Drive	250 ml?	(fill til draining)	valve cover	10mm wrench + 13mm socket	
Transmission:	850 ml	(fill til draining)			
Shaft oil:	100 ml	(only on some older bikes)			

### Airhead R Cable Clutch Adjustment

Loosen 13mm locknut and adjuster bolt at clutch pushrod.

Adjust cable adjuster barrel at clutch lever until exposed cable at transmission end is 210??mm.

Tighten adjuster bolt at clutch pushrod until it contacts the pushrod.

Tighten the 13mm locknut.

Loosen the cable adjuster barrel at the lever to give 4-7??mm play in the lever.

Tighten cable adjuster locknut.

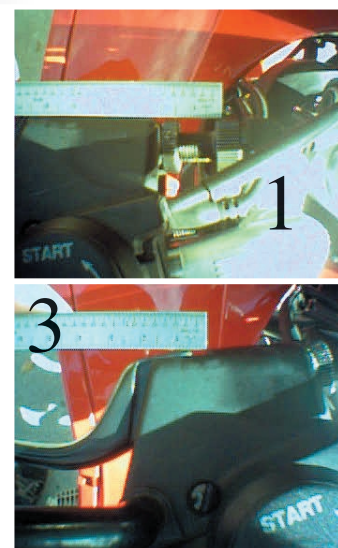
### Spline Lube

up to 1990 every year

1990 and up every 40k miles













## R1100/R850 Clutch Cable Adjustment Procedure (not for the R1100S)

- 1 Adjust the barrel adjuster at the lever to 12mm of thread between the barrel and the knurled locknut.
- 2 Now loosen the 13mm locknut/jamnut on the clutch pin, at the rear of the transmission with a deepwell socket.
- 3 Adjust the 10mm (you can usually do it by hand) bolt to the clutch pin until there is 7mm of freeplay in the cable at the lever.



# BMW Integral ABS Troubleshooting

## General Warning Light    ABS/Brake Failure Light

OFF			ON	Only RESIDUAL BRAKING FUNCTION available in both circuits.
OFF			1 Hz Flashing	ABS not available, Pull-away test not completed.
OFF			4 Hz Flashing	Only RESIDUAL BRAKING FUNCTION available in both circuits.
ON			OFF	Tail light or Brake light defective. Cruise Control not available.
ON			1 Hz Flashing	At least one brake circuit without ABS.
ON			4 Hz Flashing	At least one brake circuit in RESIDUAL BRAKING FUNCTION.

Alternate 1 Hz Flashing    Alternate 1 Hz Flashing    ABS fluid level too low.

Alternate 4 Hz Flashing    Alternate 4 Hz Flashing    ABS fluid level too low. Only RESIDUAL BRAKING FUNCTION available in at least one circuit.

## K12LT Alarm Set Procedure

(to turn all auto activations off)
















This procedure will set the alarm to be always off, unless manually armed.

1. Find fuscia plug underneath upper right subframe member, just before passenger seat begins. It is below the wiring harness, wrapped with a piece of black tape.
2. Attach a wire to the fuscia plug for grounding purposes.
3. Press LEFT button on alarm key. Red LED blinks, green flasher indicators blink/beep twice. ARMED.
4. Press the LEFT button again. Red LED off, green flasher indicators blink/beep once. DISARMED
5. Touch the wire you've set-up to the negative battery terminal. This must be done within 12 seconds.
6. WHILE THE WIRE IS STILL GROUNDED, press the LEFT button again.
7. Turn the key on, you will hear two or three beeps.
8. Press the RIGHT button 12 times. (10 for 2001 bikes.)  
The alarm will make a warbling beep, indicating that it has been set.

green flasher indicators 2 blink/beeps armed 1 blink/beep disarmed
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## K1200 Cruise Control Test Procedure

Follow in exact order

1. With the ignition switch OFF, switch on the cruise control switch.
2. Press and hold the set button to the SET position and switch ON the ignition switch. (LIGHT ON )
3. RELEASE the set button (LIGHT OFF )
4. Move to RESET position. (LIGHT ON )
5. RELEASE the set button (LIGHT OFF )
6. Switch OFF the cruise control switch. (LIGHT ON )
7. Switch the cruise control switch back ON. (LIGHT OFF )
8. Close throttle (LIGHT ON )
9. Release throttle. (LIGHT OFF )
10. Pull clutch lever (LIGHT ON )
11. Release clutch lever. (LIGHT OFF )
12. Pull front brake lever (LIGHT ON )
13. Release Lever (LIGHT OFF )
14. Push foot brake pedal (LIGHT ON )
15. Hold for 5 seconds (LIGHT OFF )
16. Release foot brake pedal (LIGHT ON )
17. Rotate rear wheel. (LIGHT goes OFF and ON as wheel turns.)
18. Switch off ignition.