Leisure Trail UK
Independant Importers of
Japanese Trail Bikes and
Honda CRM Parts Specialists

Oakleys Yard, Beech Ave, Long Eaton, Nottingham, NG10 2AX. Tel or Fax 0115 973 2466

HONDA
CRM250
Mk1, 2 & 3

Service & Workshop
Manual

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Honda CRM 250 Mk1,2 & 3 General Specification

	CRM250 Mk1	*CRM250 Mk2*	*CRM250 Mk3*
Engine			
Bore x Stroke	66.00 x 72.00mm	66.00 x 72.00mm	66.00 x 72.00mm
Cubic Capacity	246cc	246cc	246cc
Compression Ratio	6.2	6.4	6.7
Max Power	37PS/8,500rpm	40PS/8,000rpm	40PS/8,000rpm
Max torque	3.4kg-m/6,500rpm	3.7kg-m/6,500rpm	4.0kg-m/6,500rpm
Gearbox Oil Grade	SAE 10W-30	SAE 10W-30	SAE 10W-30
Gearbox Oil Qty	600 – 650cc	600 – 650cc	600 – 650cc
Coolant Qty	0.93 litres	1.25 litres	1.25 litres
Thermostat Closes	65 deg C	62 deg C	62 deg C
Thermostat Opens	80 deg C	72 deg C	72 deg C
Spark Plug (Std)	NGK BR8ES	NGK BR8ES	NGK BR8ES
Spark Plug (Racing)	NGK B8EG or EGV	NGK B8EG or EGV	NGK B8EG or EGV
Spark Plug Gap	0.7 – 0.8mm	0.7 – 0.8mm	0.7 – 0.8mm
Ignition Timing	10deg BTDC/1,300rpm	12deg BTDC/1,300rpm	10deg BTDC/1,300rpm
Bore Wear Limit	66.15mm	66.15mm	66.15mm
Fuel System			
Fuel Tank Capacity	10 litres	10 litres	11 litres
Fuel Tank Reserve	2.2 litres	2.2 litres	2.5 litres
Carburettor	PE31A 32mm	PE31C 32mm	PE31E 32mm
Air Screw Setting	2-1/4 turns out	1-1/4 turns out	1-1/4 turns out
Float Ht	16.00mm	16.00mm	16.00mm
Tick-over Speed	1,300rpm	1,300rpm	1,300rpm
Needle Clip Position	3 (middle)	3 (middle)	3 (middle)
Main Jet Size	132	128	150
Pilot Jet Size	45	48	45
Chassis Spec			
Gross Wt	123Kg	127Kg	127Kg
Wheelbase	2100mm	2300mm	2300mm
Rake	26.66 deg	27.5 deg	27.6 deg
Trail	104mm	113mm	113mm
Front Rim/Tyre Size	1.60/3.00–21 (90/90-21)	1.60/3.00–21 (90/90-21)	1.60/3.00–21 (90/90-21)
Rear Rim/Tyre Size	2.15/4.60-18 (120/90-18)	2.15/4.60-18 (120/90-18)	2.15/4.60-18 (120/90-18)
Tyre Pressure (road)	25-28 psi	25-28 psi	25-28 psi
Tyre Pressure (Offroad)	12-16 psi	12-16 psi	12-16 psi
Drive Chain	RK/DID 108 links	RK/DID 110 links	RK/DID 110 links
Std Sprockets	14/42	14/42	14/42
Front Fork Oil	7.5 – 10wt	5 – 7.5wt	5 – 7.5wt
Front Fork Oil (per leg)	535cc	653cc	700cc
Front Fork Oil Level	132mm	108mm	90mm
F/Fork Comp Adjust		2.5 Turns Ckwise = Hd	2.5 Turns Ckwise = Hd
R/Shock Comp Adjust		Clockwise = Hard	Clockwise = Hard

If you are unclear about any of the information above please give us a call.

Service Intervals/Tasks (Off-road use)

250 Kms
- Two-stroke oil top-up.
- Tyre pressures.
- Drive chain adjustment/lube.
- Brake pad condition.

1,000 Kms
- Change gearbox oil.
- Change spark plug.
- Check coolant level.
- Clean air filter.
- Check oil pump adjustment.
- Check wheel bearings/spokes.
- Check brake fluid levels.
- Inspect tyres for wear/damage.

Gearbox Oil Change

1. Stand bike as vertical possible, Place suitable container under engine, remove drain plug and allow to drain for 10-15 minutes. Refit drain plug.

2. Remove oil level plug and using a Quality Gearbox oil of SAE 10W-30 grade, fill gearbox until oil drips from level hole, usually between 600- 650cc, refit level plug.
   Note hold bike vertical whilst waiting for oil to emerge from level hole.

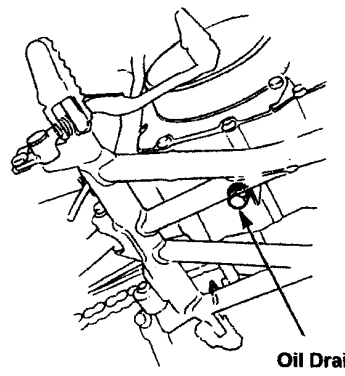
Checking Coolant Level

3. Remove right radiator panel and visually check coolant level in expansion/header tank if below lower level top up with coolant of minimum 30% anti-freeze strength. Normally it is not necessary to remove radiator cap unless system is or needs draining.
   Note Never remove radiator cap unless engine is cold.
   To release rad. cap first remove small securing screw.

Draining Coolant System

4. Although not a service requirement if the system needs draining first remove coolant drain plug on water pump then remove rad. cap and coolant will gush out !
   To refill refit drain plug, fill radiator to bottom of filler neck, refit rad. cap and check header tank level, ride bike and recheck.

1



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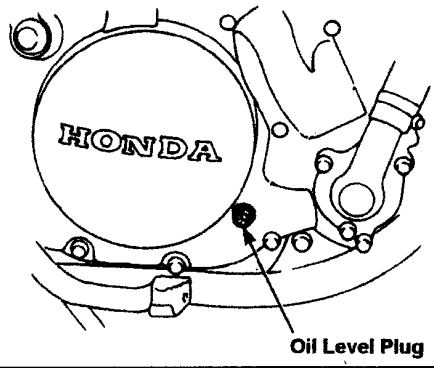

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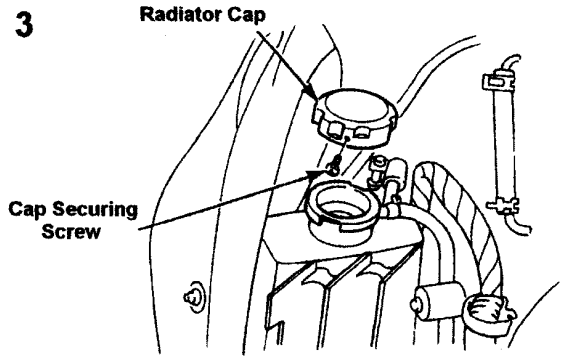

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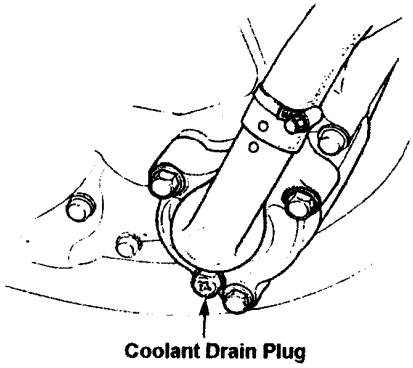


Air Filter Maintenance

1. Remove left side panel to gain access to Air filter box, then pull out restrictor plate (Mk1/2 only) if fitted.

2. Un-hook securing clip and pull out filter and remove foam filter from cage.
Wash filter in water-soluble de-greaser i.e. Jizer and allow to dry.
Soak filter in Air filter oil and squeeze out excess. Fit filter on to cage and refit in air box ensuring filter is correctly located, secure holding clip and replace plate and sidepanel.

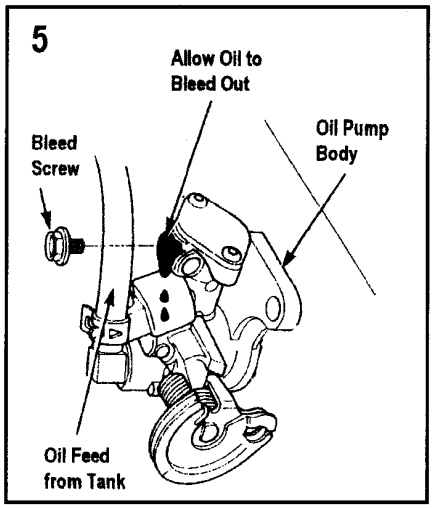
Oil Pump Adjustment

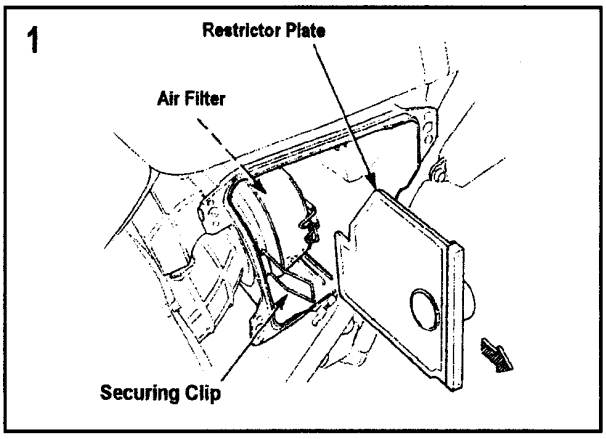
3. To ensure correct setting of Oil pump, remove cover to expose Oil pump, hold throttle fully open, check mark on pulley aligns with pointer on pump, also inspect cable for fraying etc.

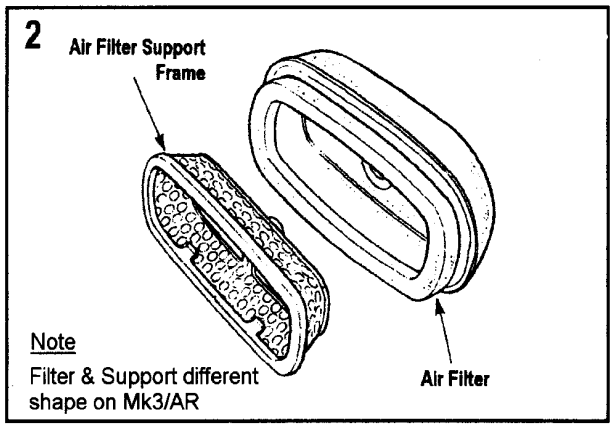
4. If mark does not line up, loosen locknut and turn cable adjuster until pulley mark lines up with pointer. Tighten locknut, operate throttle couple of times and re-check if ok refit cover.

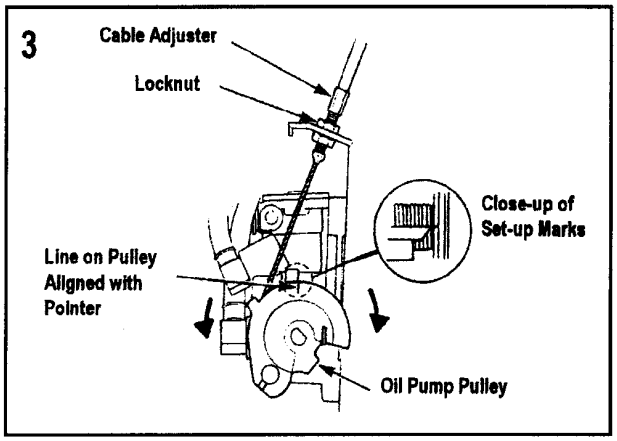
Bleeding Oil Pump

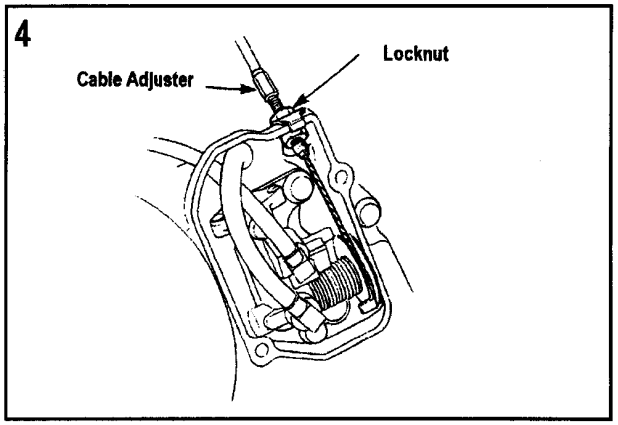
5. If the feed pipe from oil tank has been disconnected or oil tank drained, the oil pump needs to be bled to remove any air in the system, after filling oil tank remove bleed screw shown and allow oil to drip out until bubbles stop and oil flows constantly, replace bleed screw.











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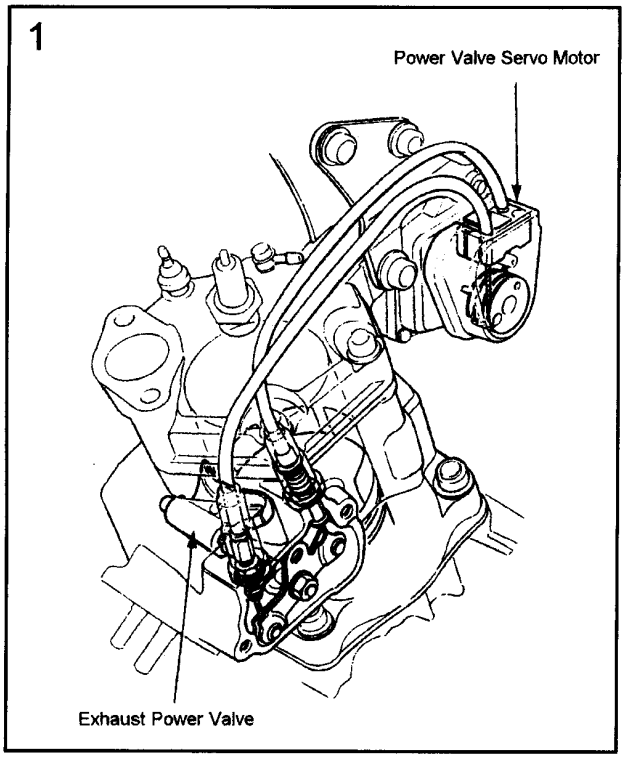
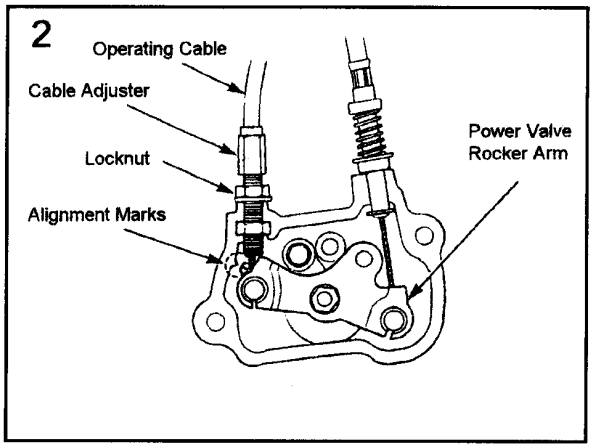


Power valve Adjustment

2



Power Valve Adjustment

1. **This illustration is a general view of Servo Motor, Operating Cables and Exhaust Valve layout.**

2. **To check correct setting of exhaust Power valve, first remove small cover on left side of barrel secured by two 8mm headed bolts.**
The Power Valve operating rocker arm is now exposed, to check setting start engine and allow to warm up until it will tick-over at normal speed (1300 rpm).
Now inspect the Alignment marks and they should line up as shown above.
If marks don't align slacken off locknut and turn cable adjuster in or out until correct adjustment is achived. Tighten locknut and rev engine then allow to idle and re-check.
If ok replace cover and secure (no gasket is fitted).

Chassis General Service Tasks

Drive Chain Adjustment

To check correct tension it is best to sit astride bike and then feel amount of play in chain (check mid-way between sprockets), in this position up/down play should be about 15 – 20mm. This converts to about 50mm if bike is mounted on stand with rear wheel of the ground. It should go without saying the chain should be regularly sprayed with chain lube.

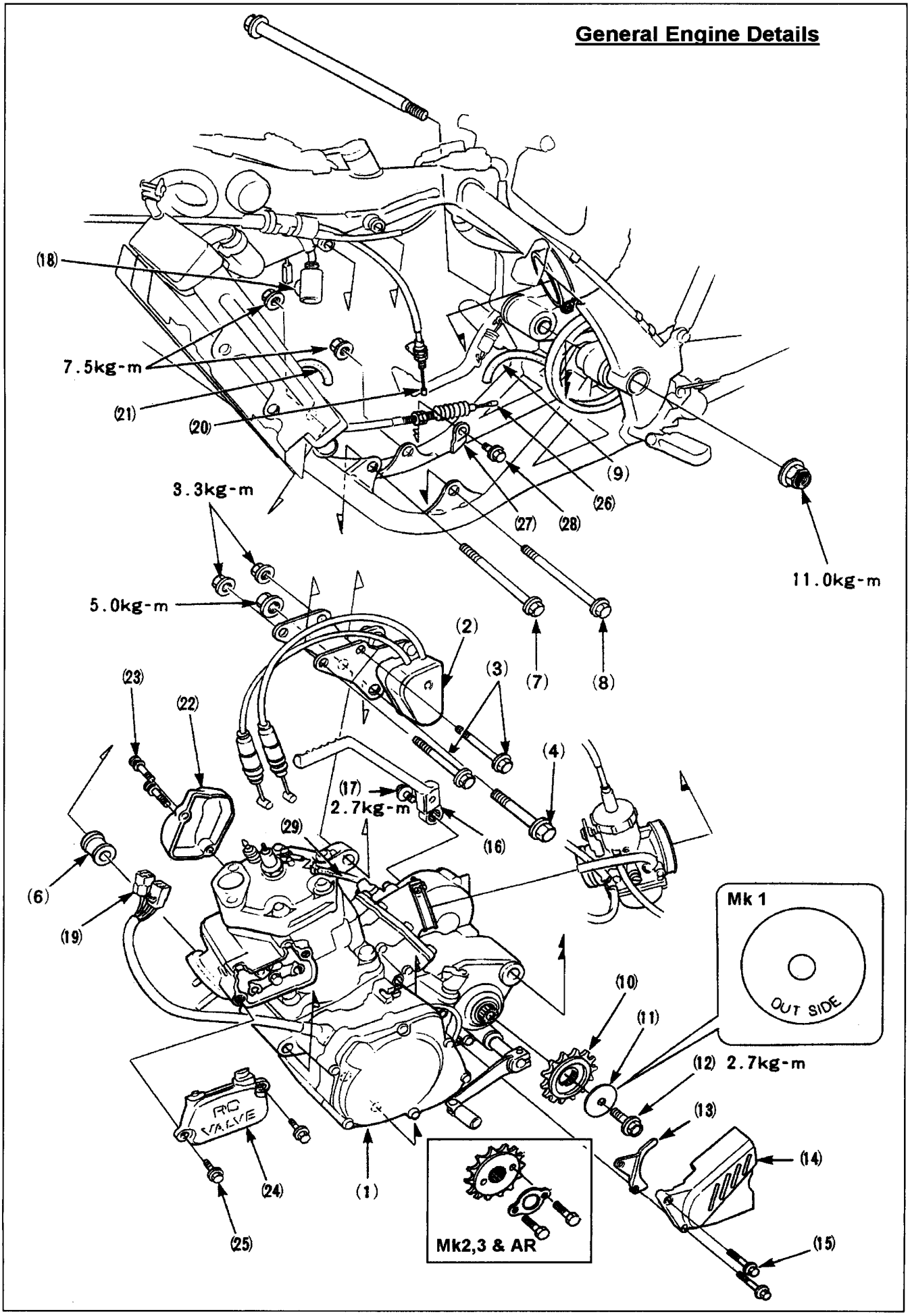
Brake Pad Wear & Fluid Level

Inspect front and rear brake pad after every off-road jaunt as they can wear extremely fast in muddy abrasive conditions. If friction material is worn to below 2mm it's best to replace the pads as they may wear down to metal backing plate during next ride which will badly damage disc.
Check fluid level regularly as it get low as pads wear.
Normal compound brake pads are generally best as they don't wear brake disc's, but if you are suffering excessive pad wear sintered (copper coloured) pads will last longer, at expense of brake feel and long term disc wear.

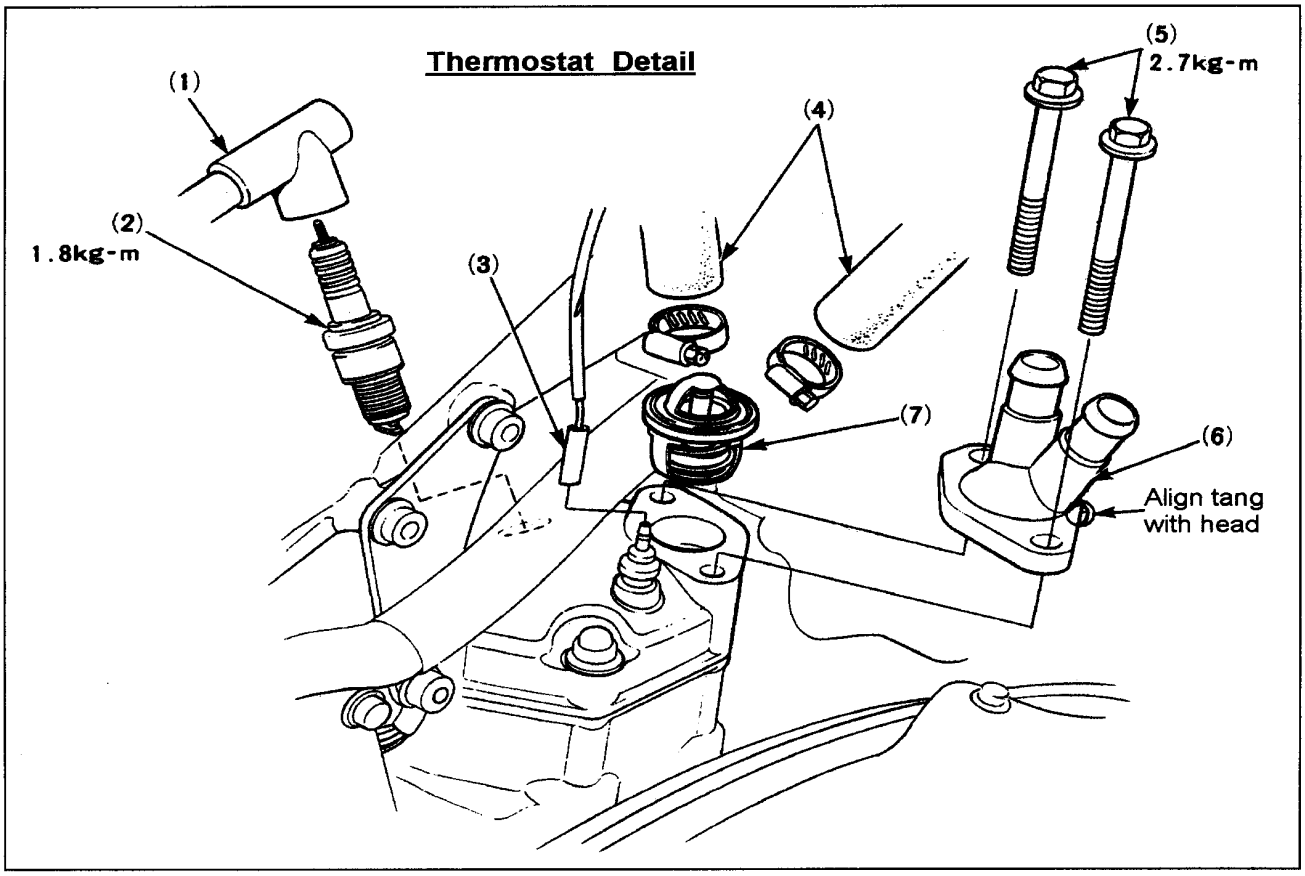
Wheel bearings

CRM's are quiet hard on wheel bearings so check play in both wheels regularly, always use quality sealed bearings and replacing the outer seals will increase bearing life.

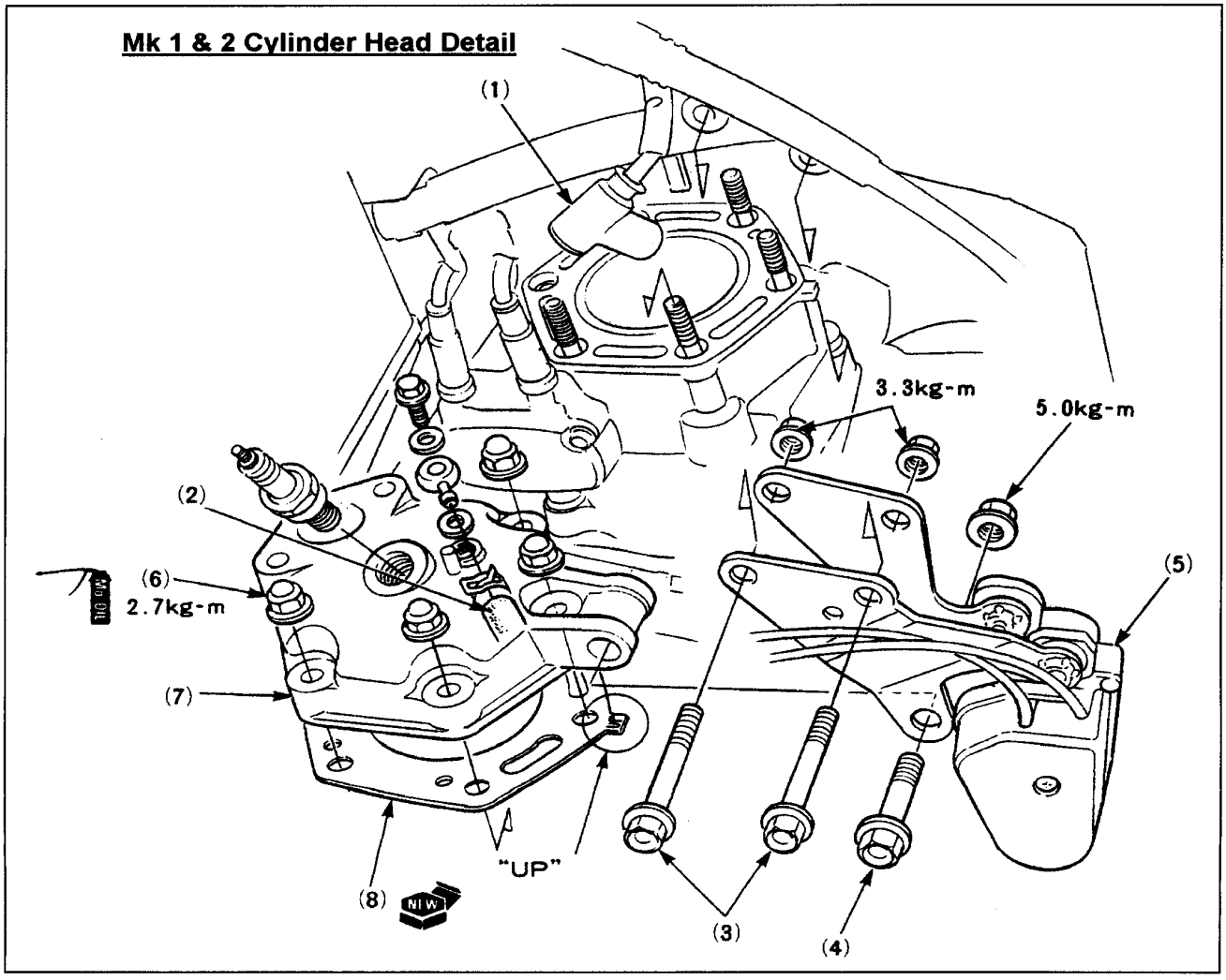
General Engine Details

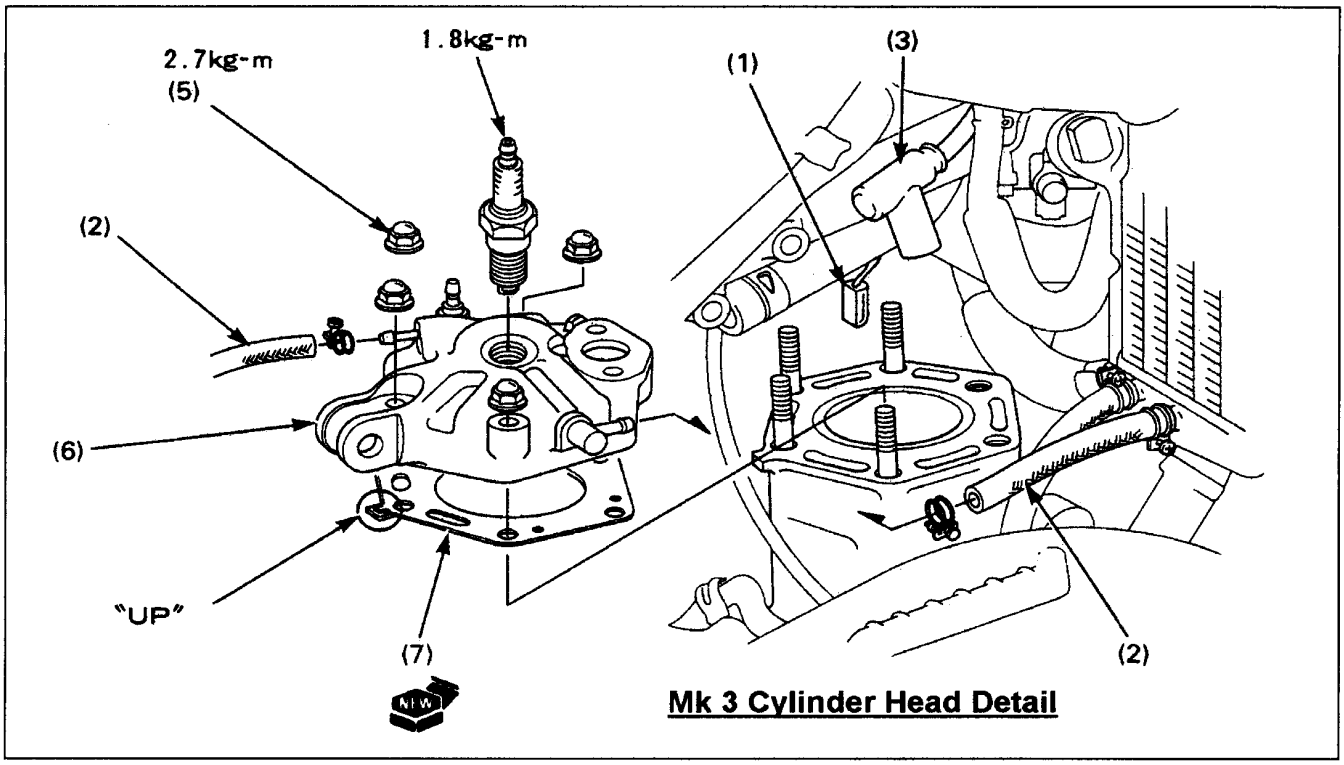


Thermostat Detail

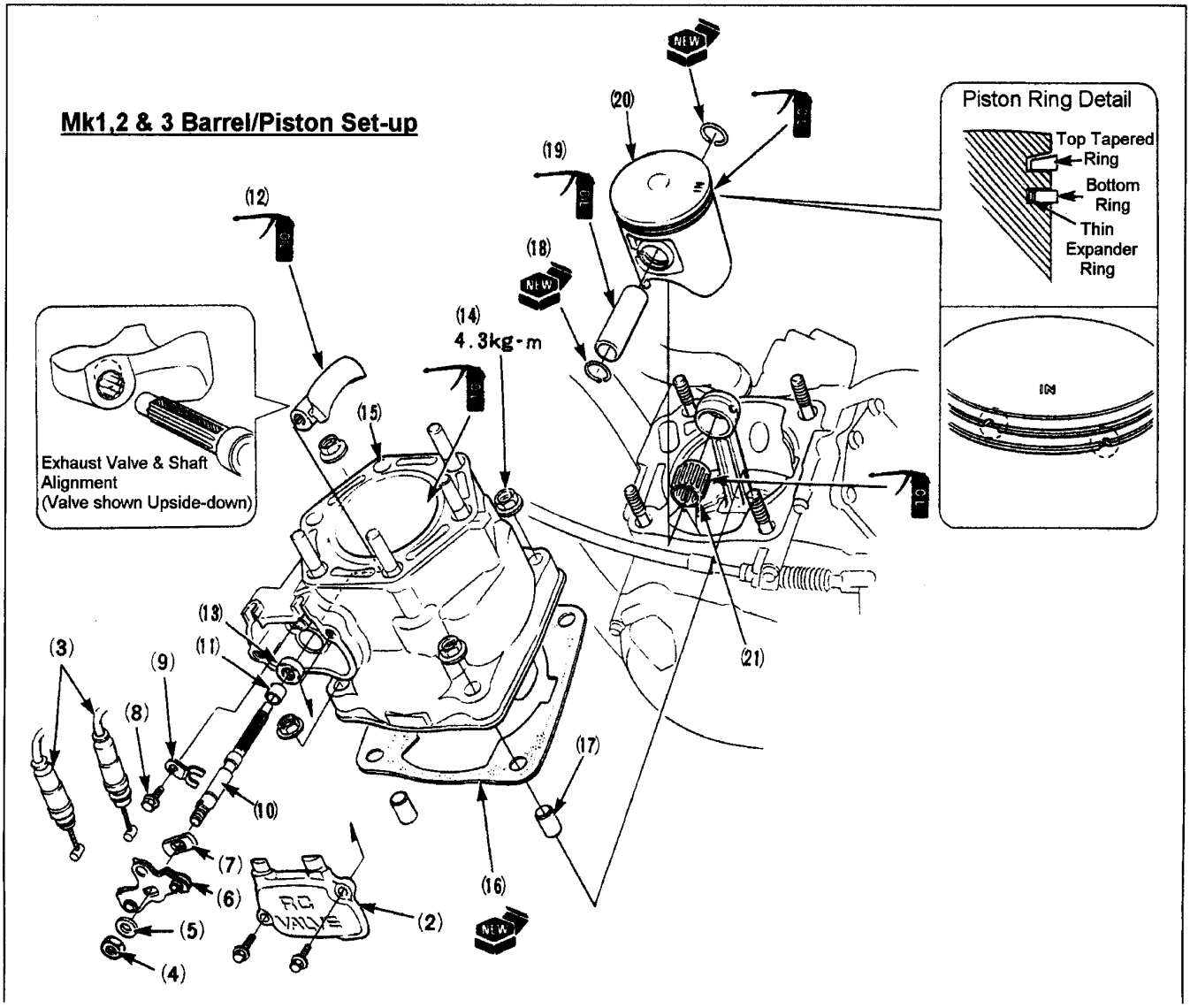


Mk 1 & 2 Cylinder Head Detail

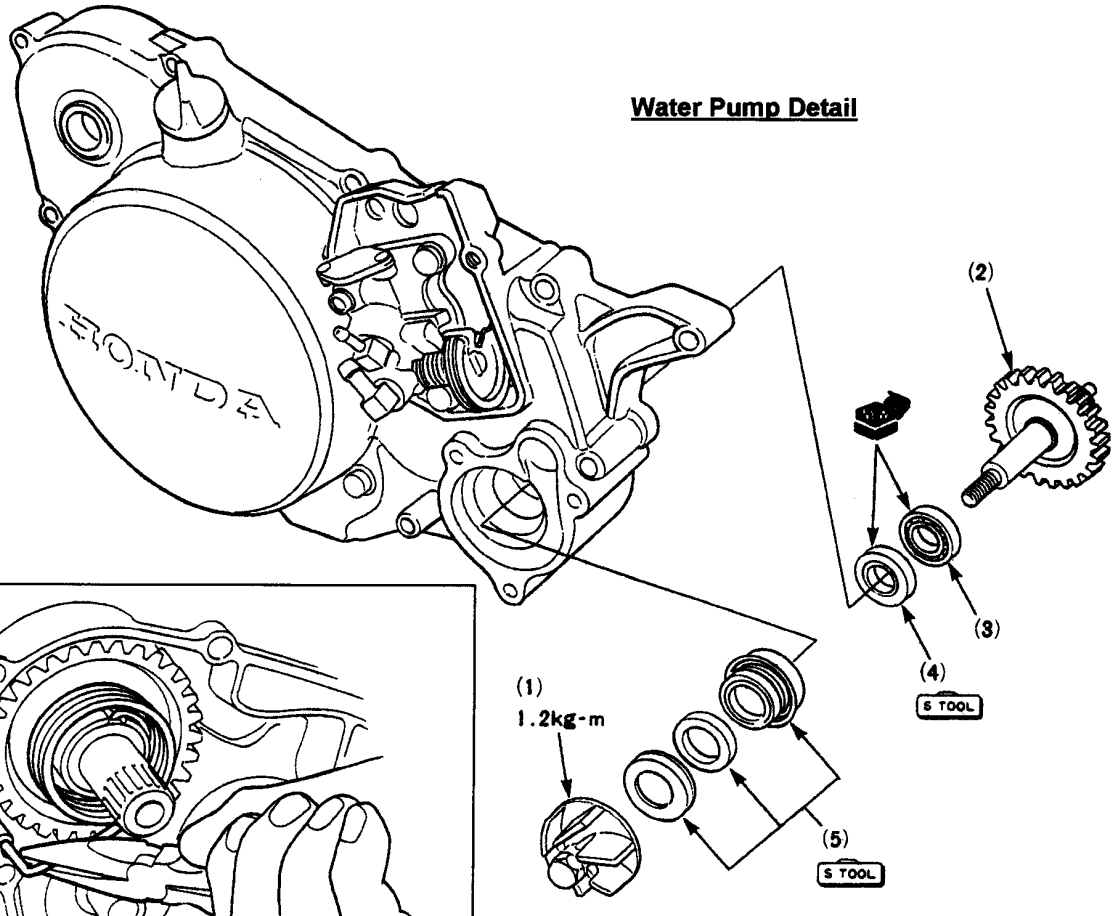


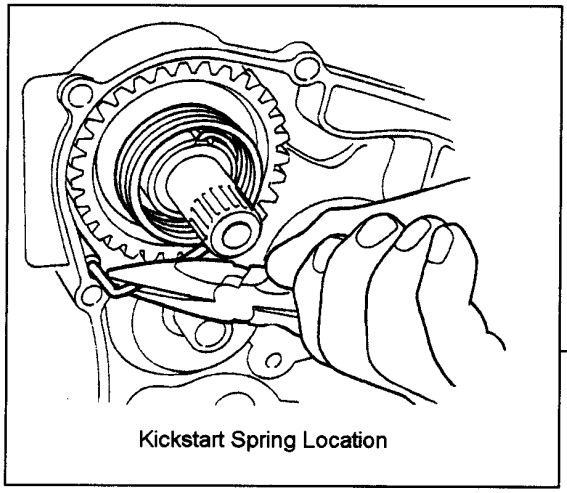


Mk 3 Cylinder Head Detail

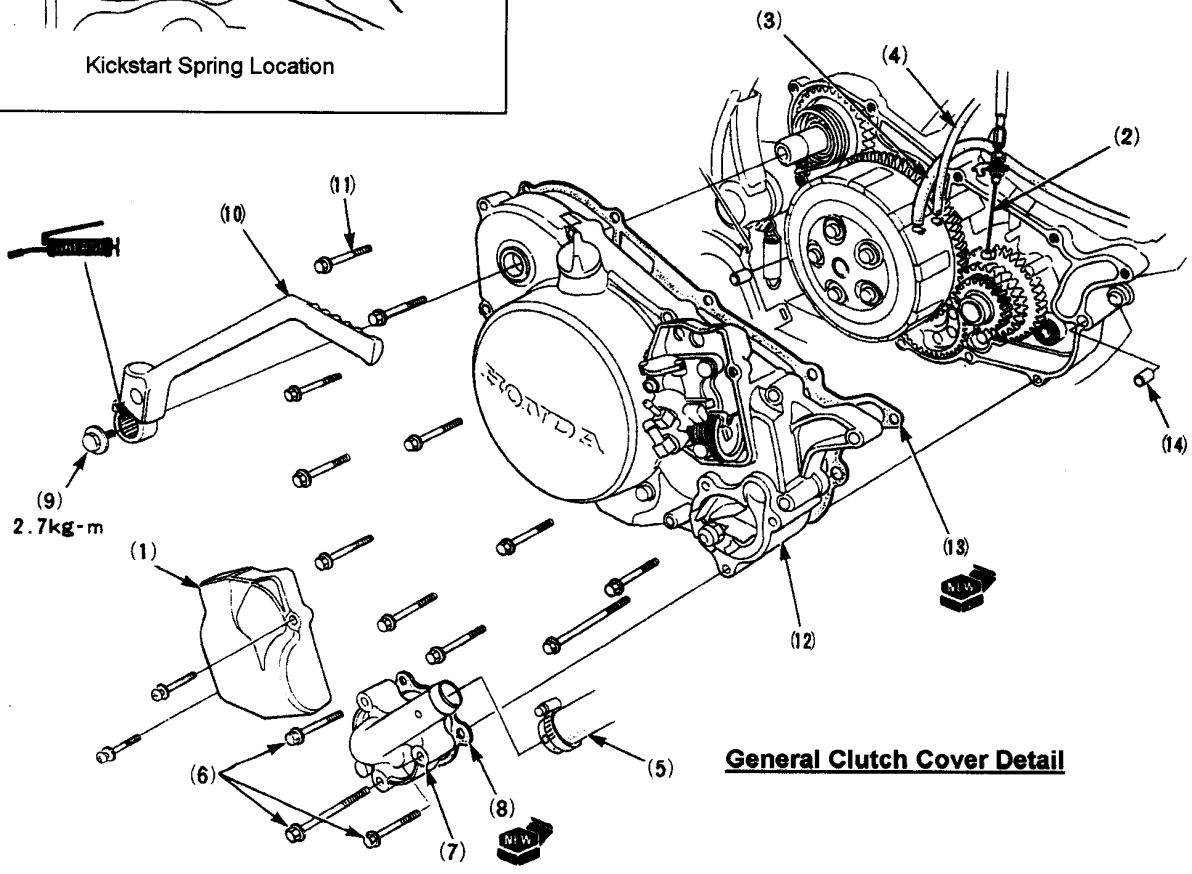


Water Pump Detail

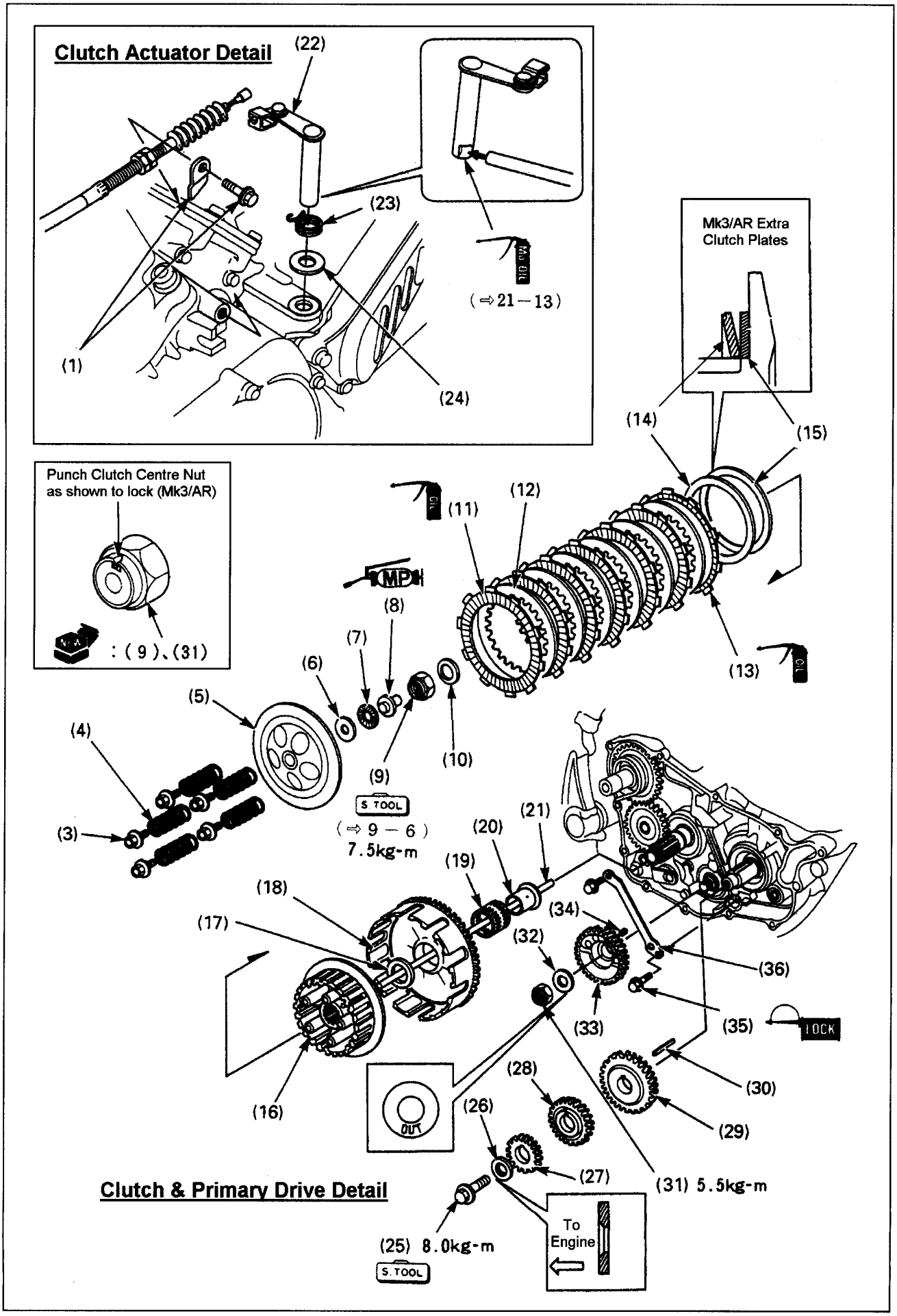




Kickstart Spring Location

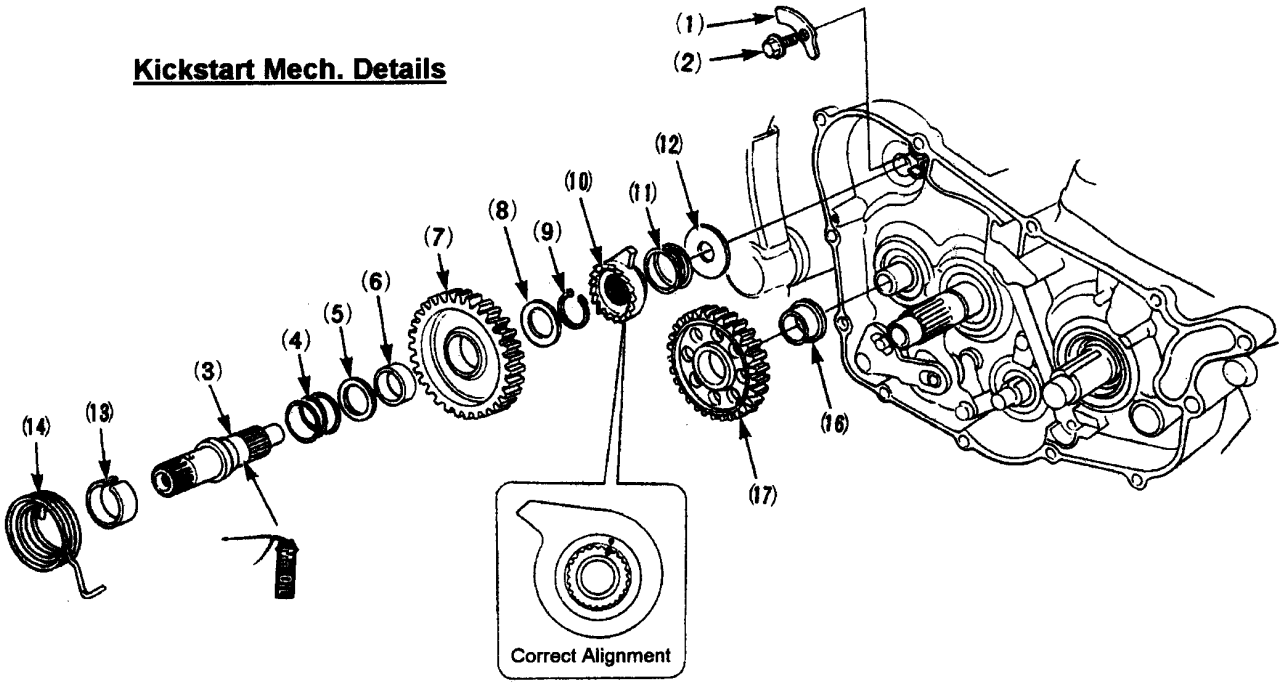


General Clutch Cover Detail

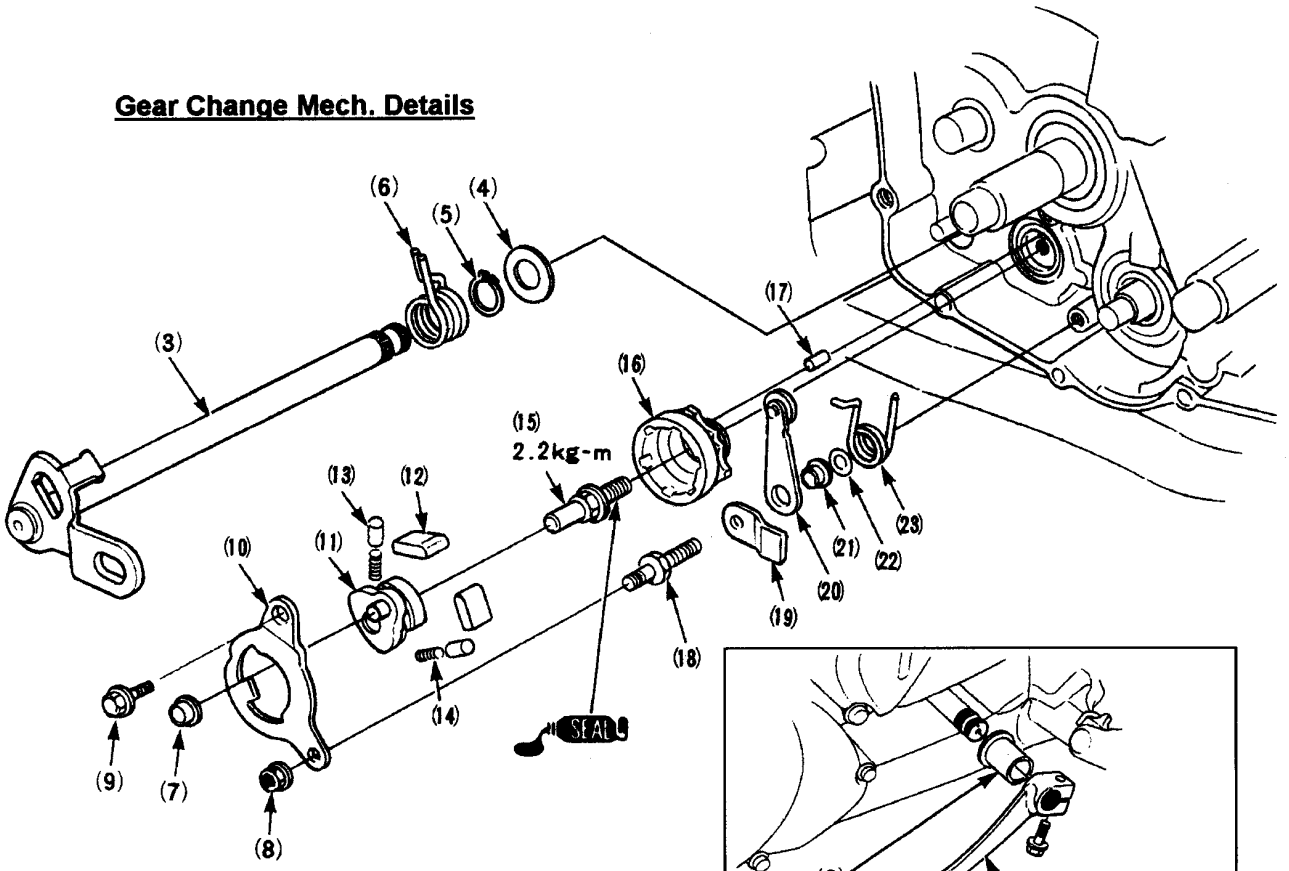


Clutch & Primary Drive Detail

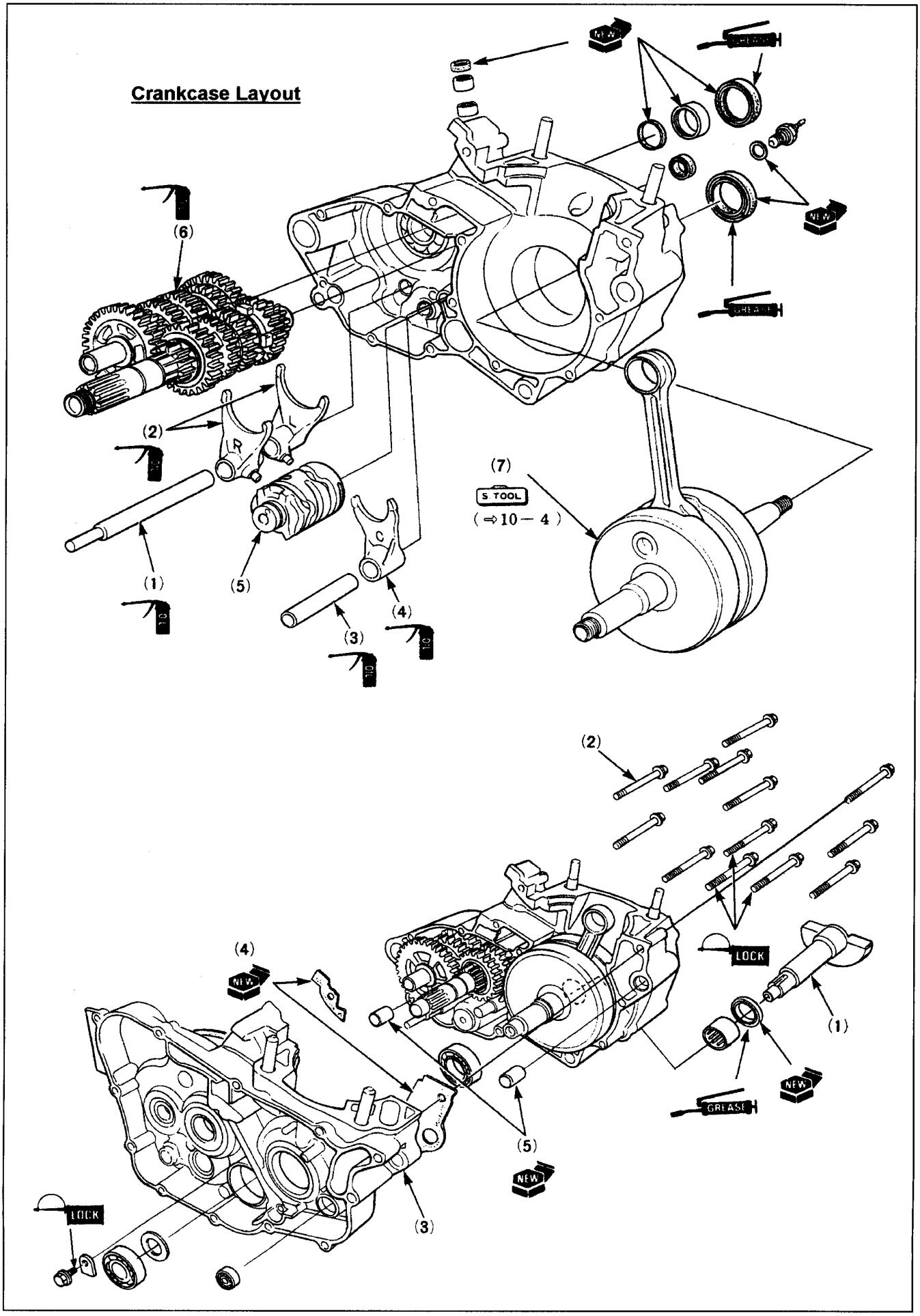
Kickstart Mech. Details



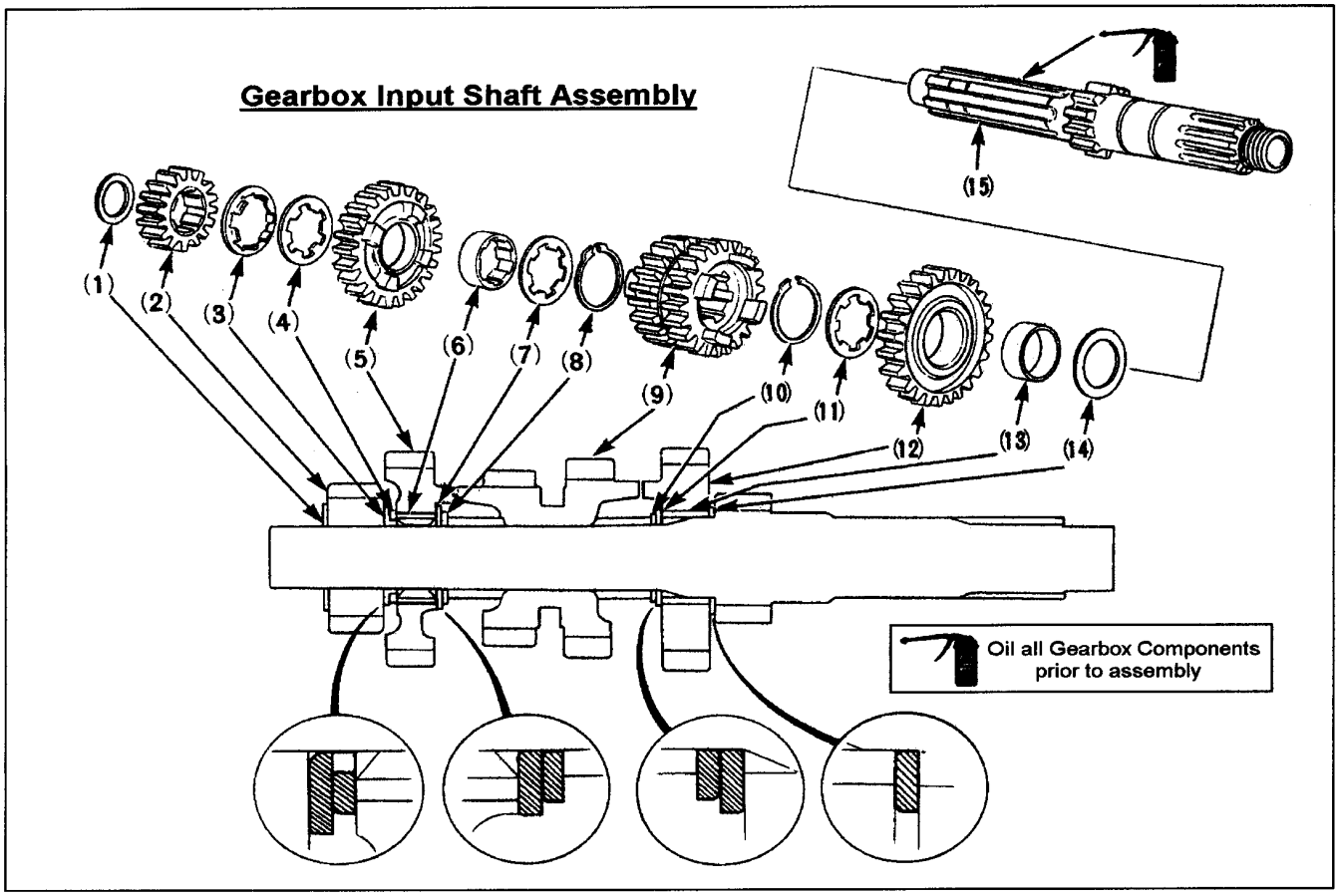
Gear Change Mech. Details



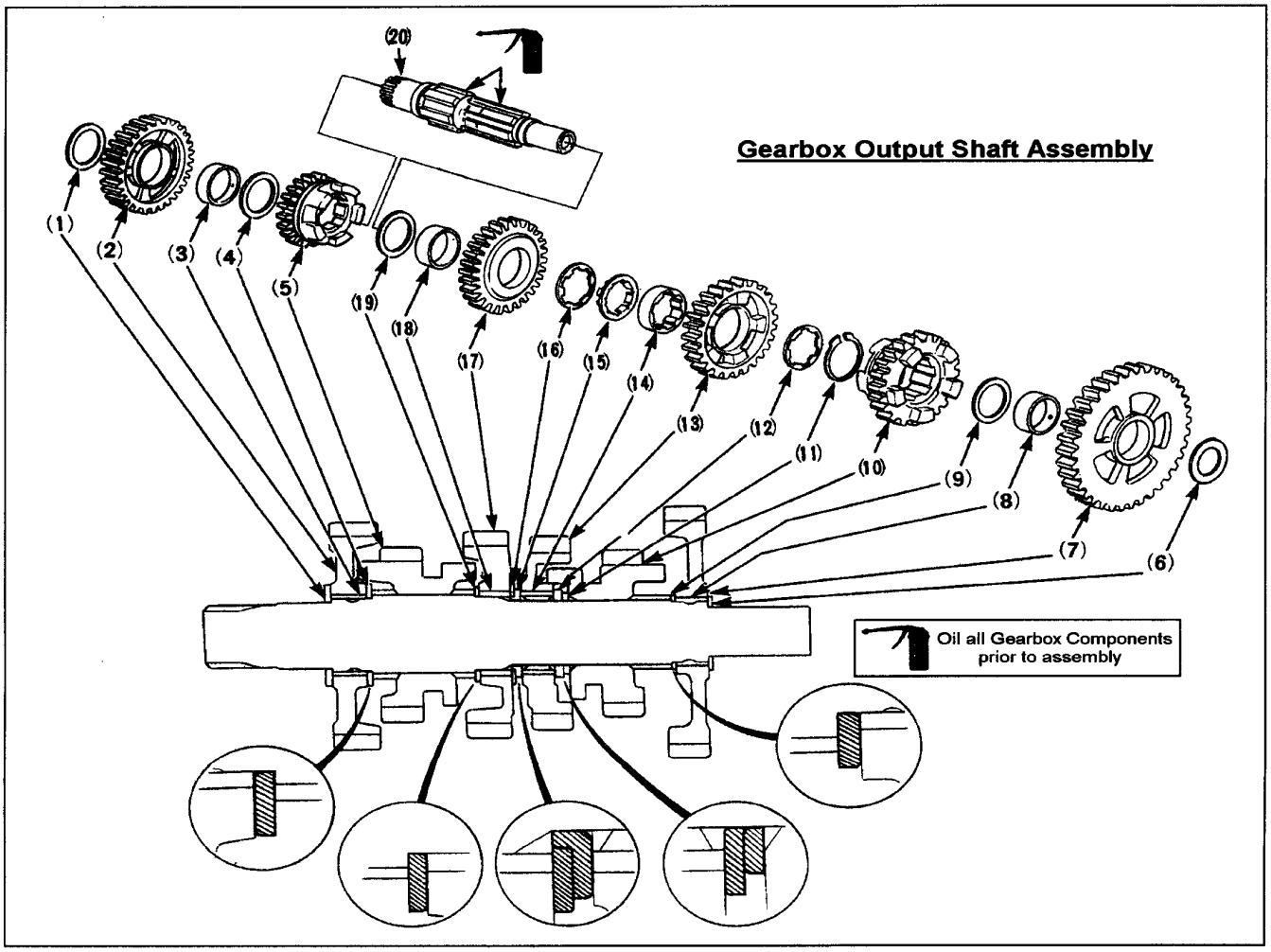
Crankcase Layout



Gearbox Input Shaft Assembly

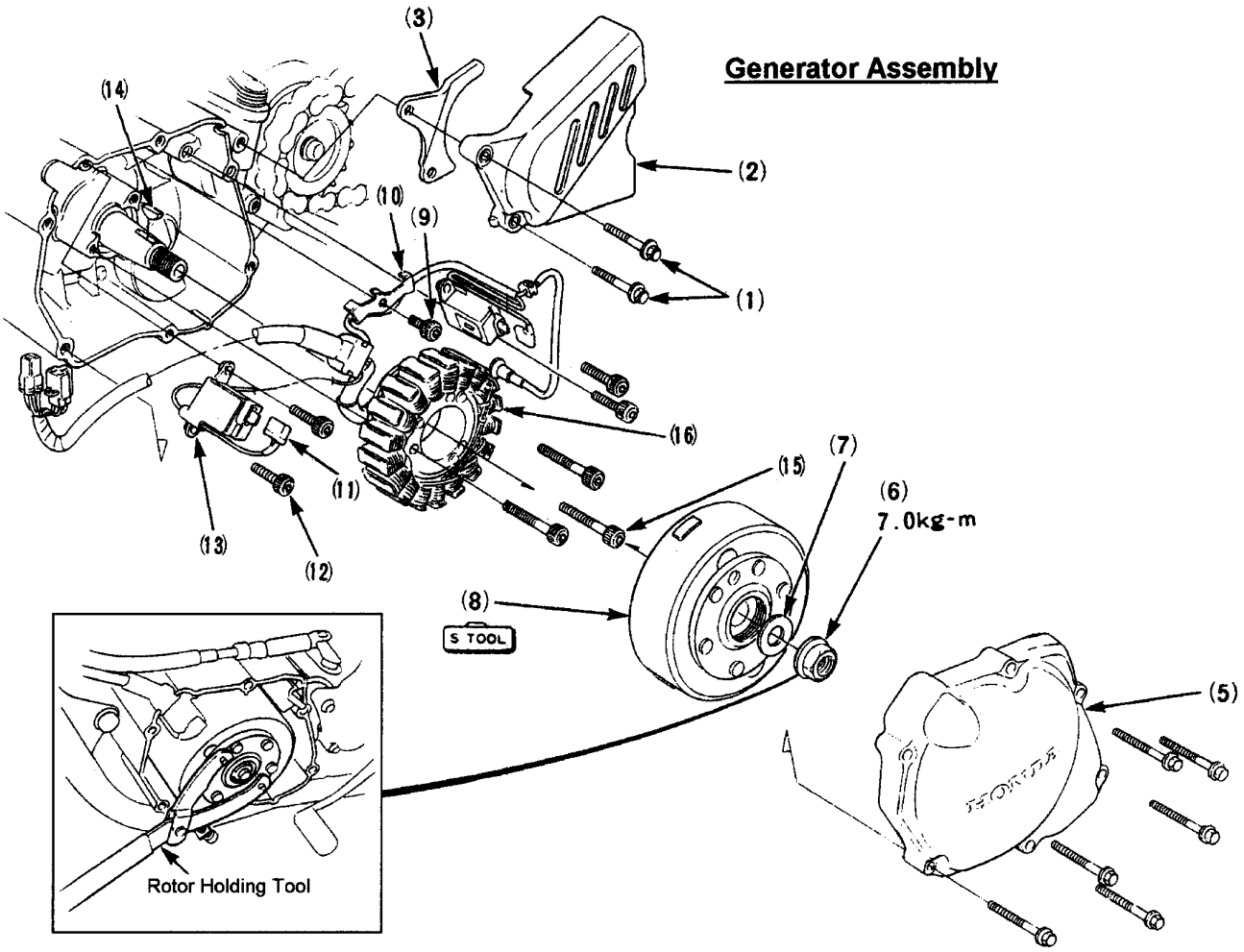


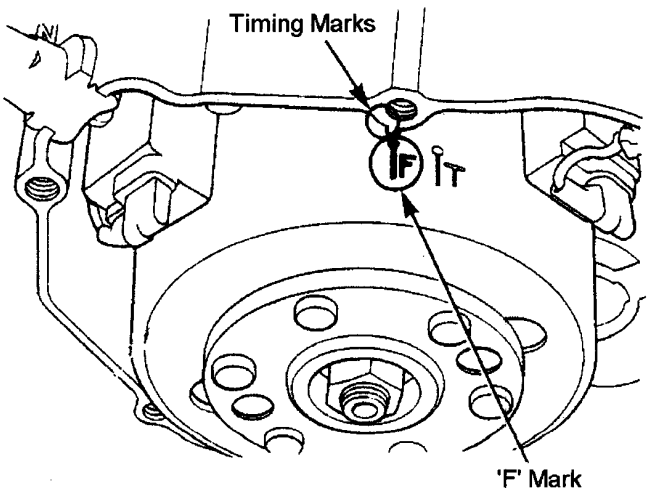
Gearbox Output Shaft Assembly



CRM250 Workshop Manual

Generator Assembly



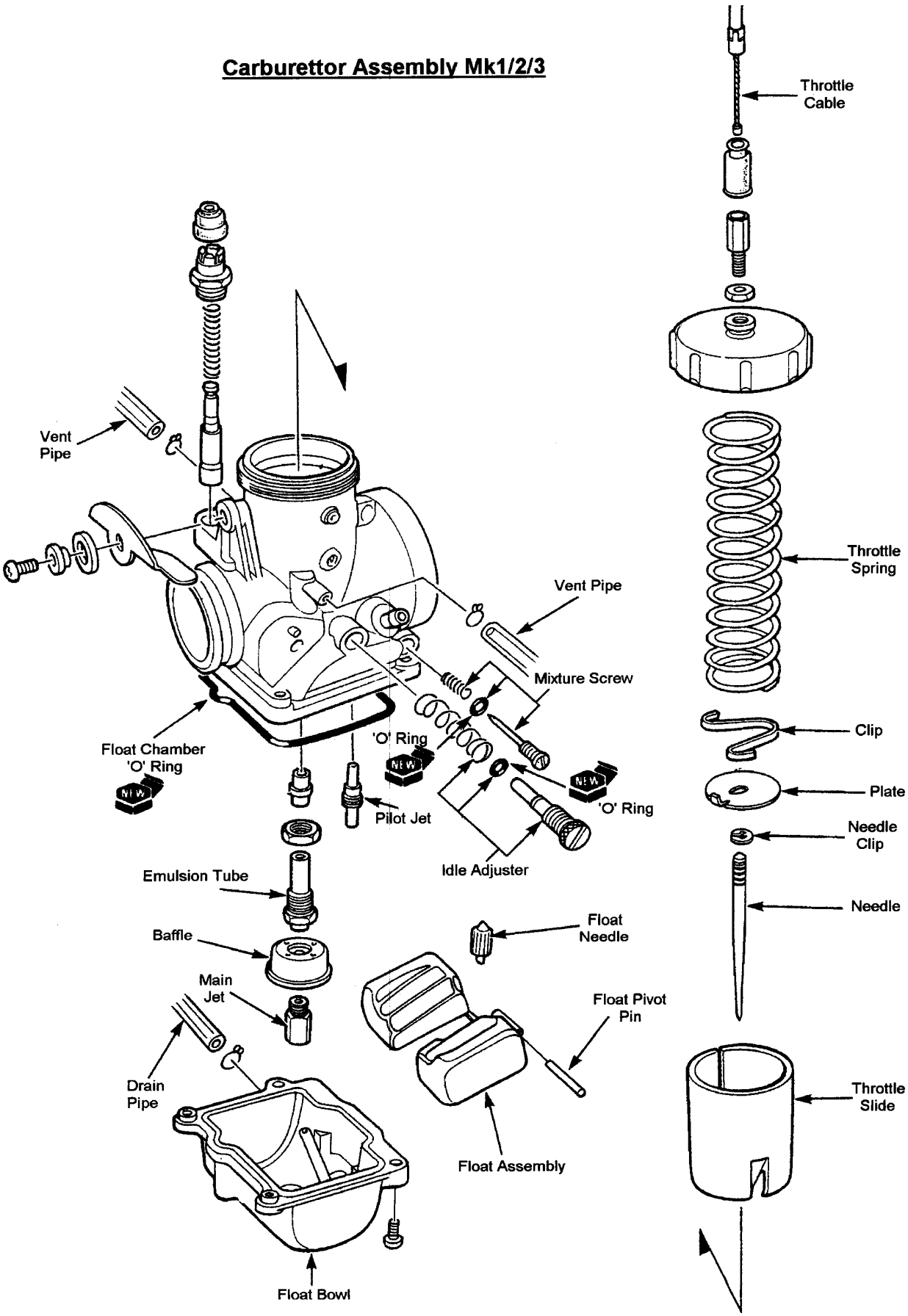


Ignition Timing

Use a strobe to check that 'F' mark on Generator Rotor aligns with pointer on gasket face at 1200 rpm. If it is out of line you're in trouble as there is no means of

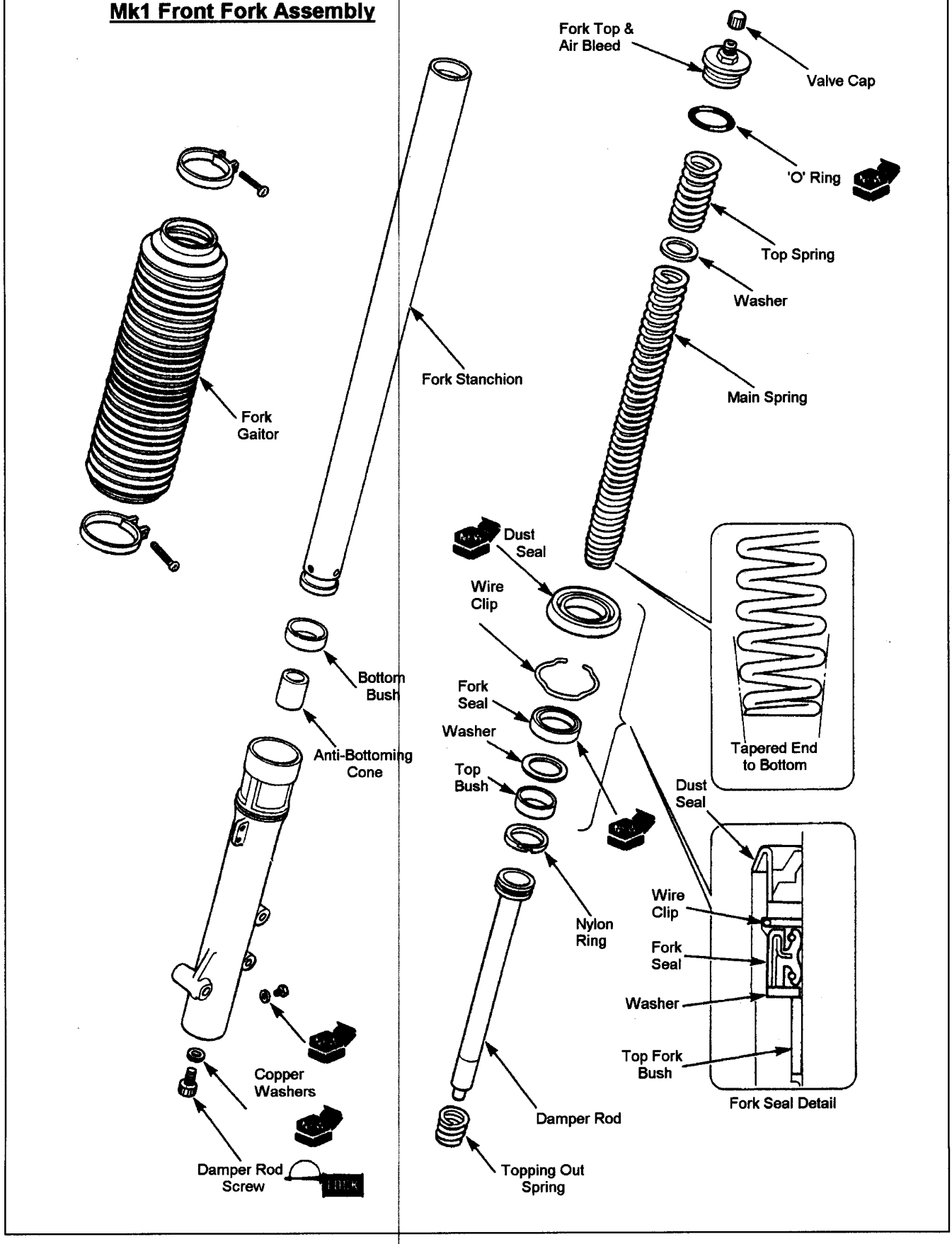
For information the 'T' mark, when aligned, sets piston at TDC.

Carburettor Assembly Mk1/2/3

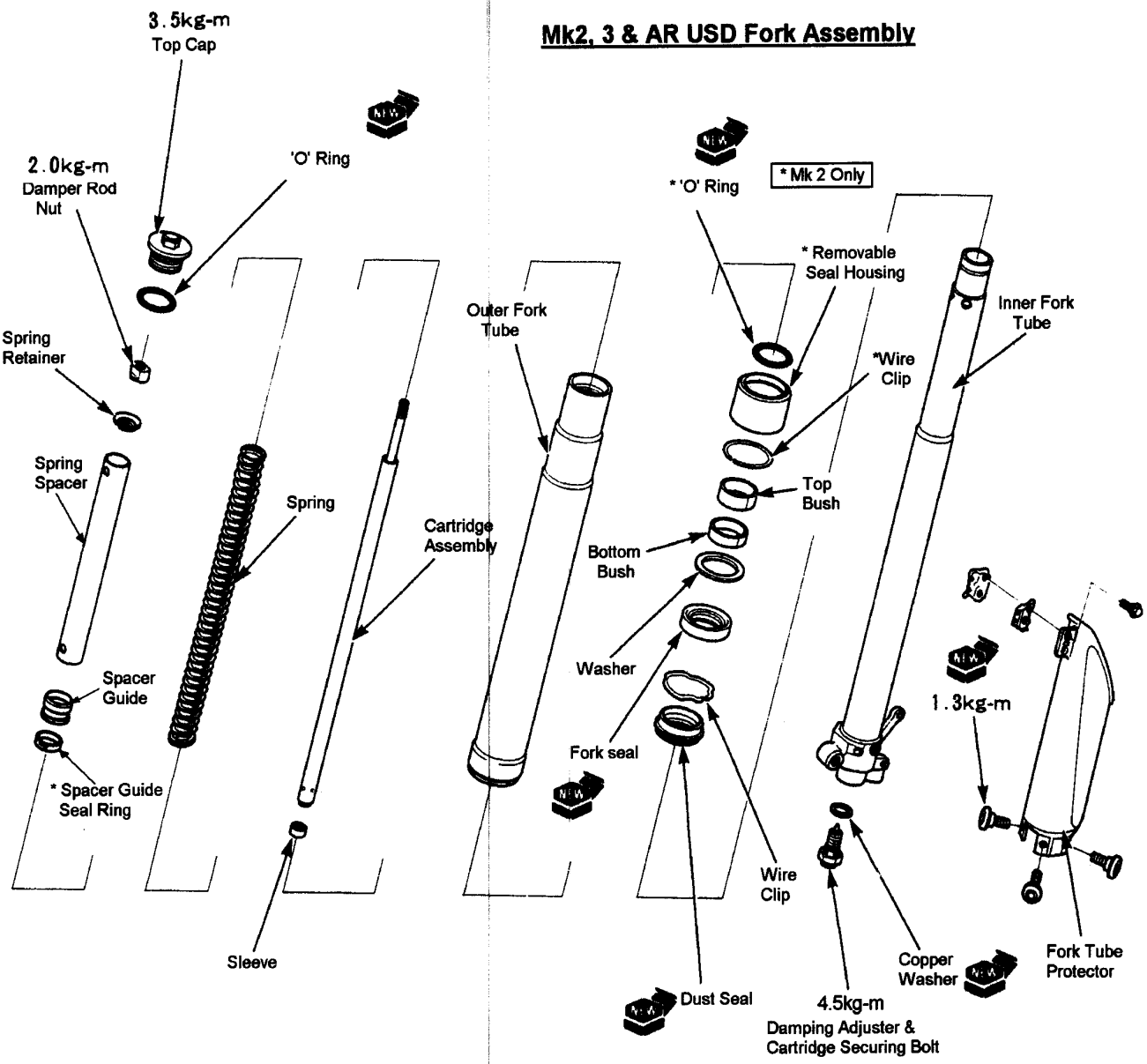


CRM Carb is prone to blocking especially the Pilot Jet, if you have trouble with erratic running give carb good clean and blow out with air line, often a new Pilot Jet is the only cure.

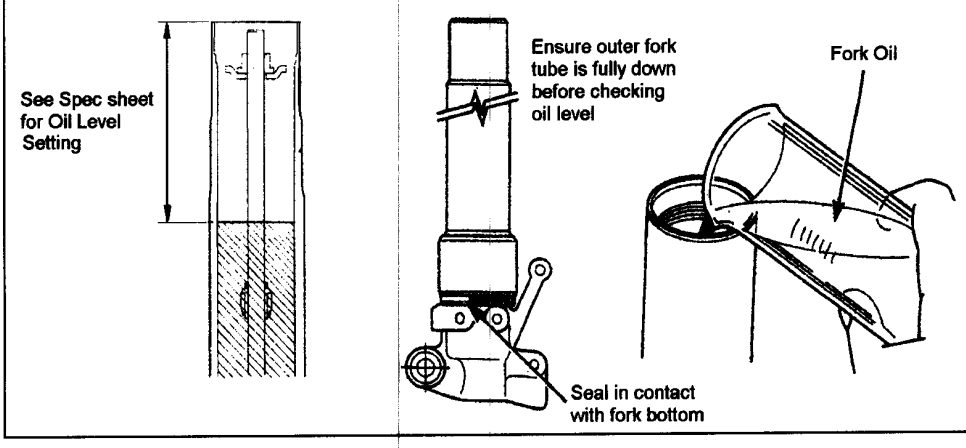
Mk1 Front Fork Assembly



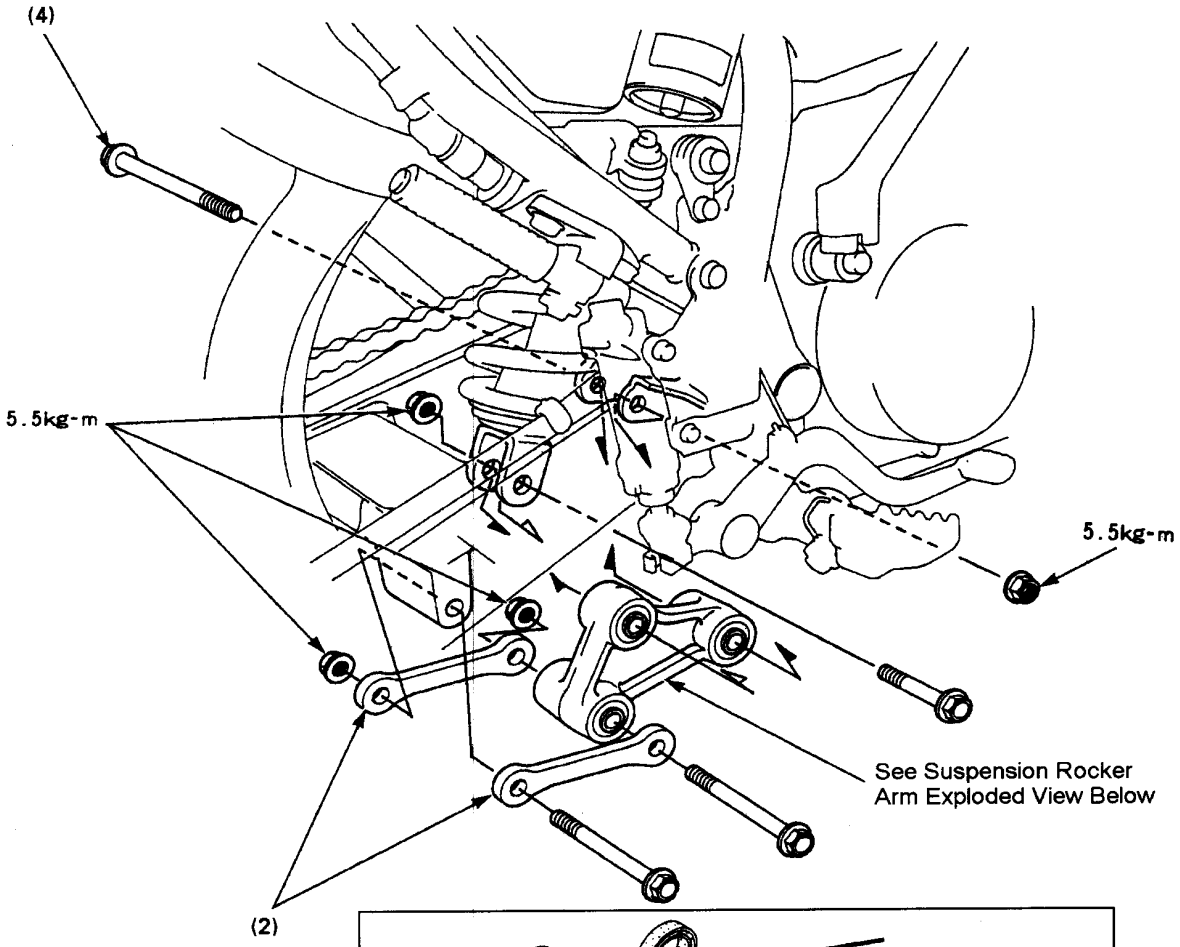
Mk2, 3 & AR USD Fork Assembly

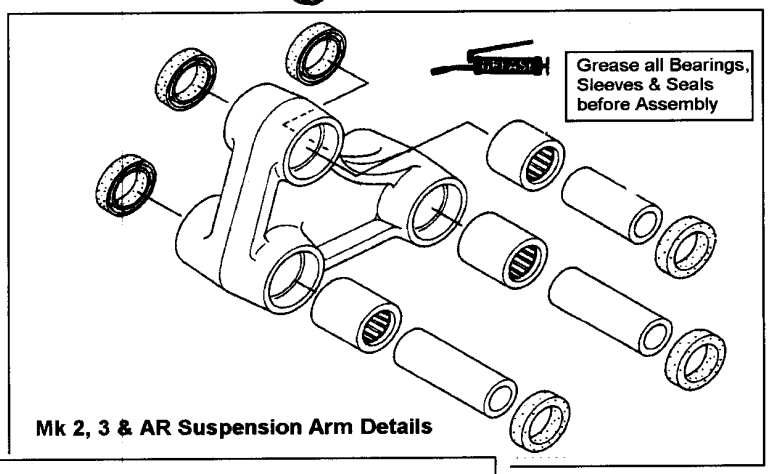


Replacing Fork Oil & Setting Oil Level

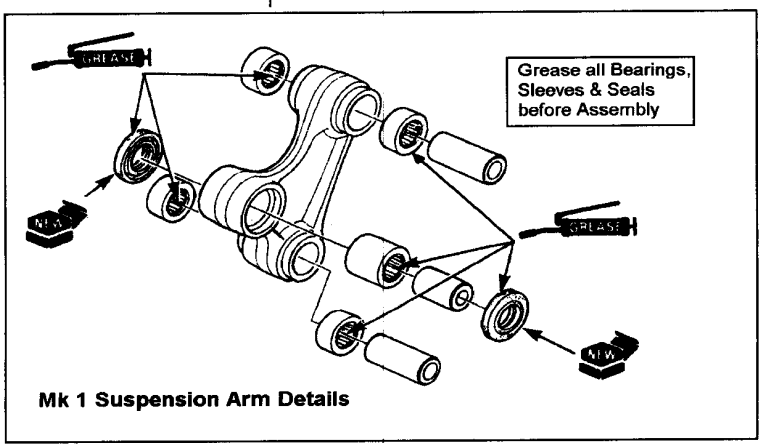


Rear Suspension Linkage Assembly



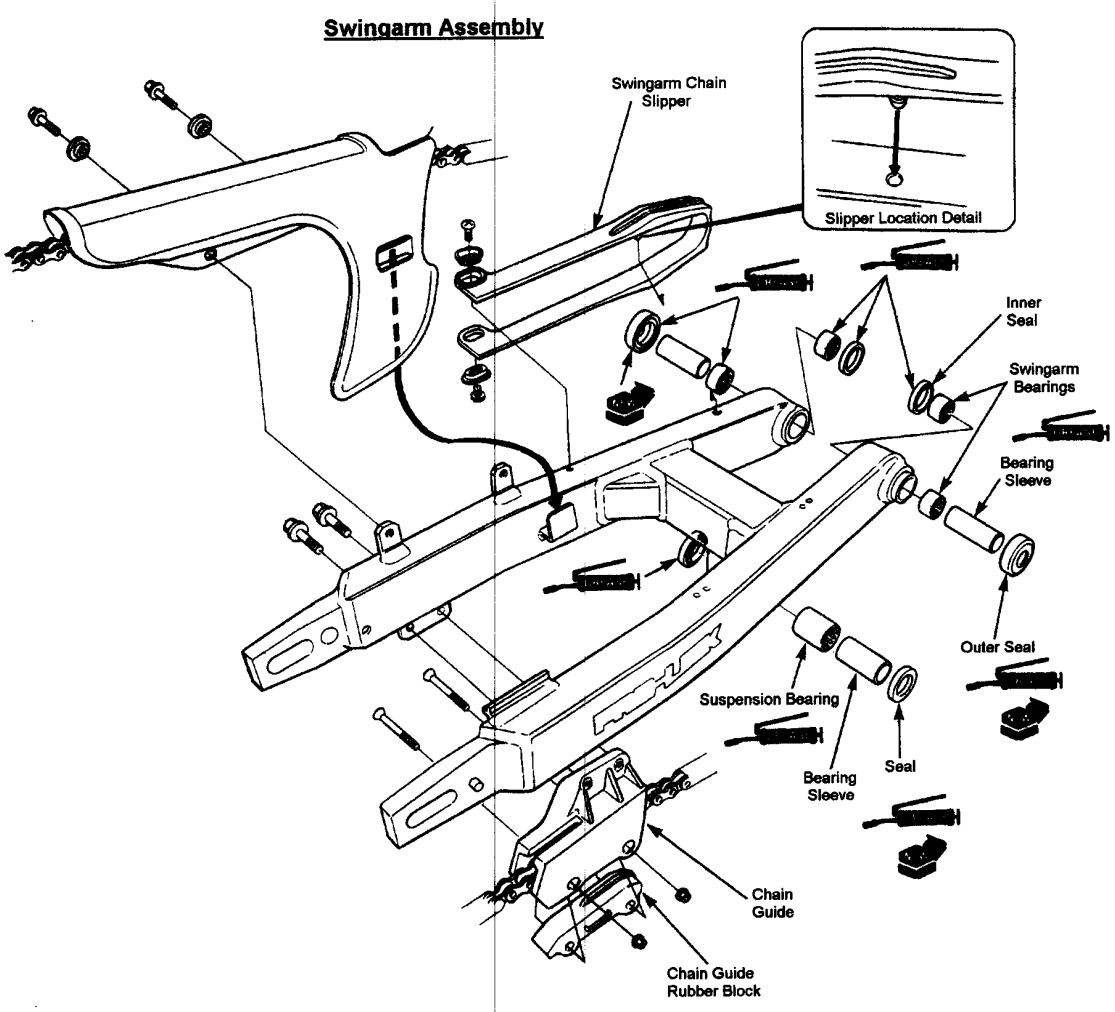


Mk 2, 3 & AR Suspension Arm Details

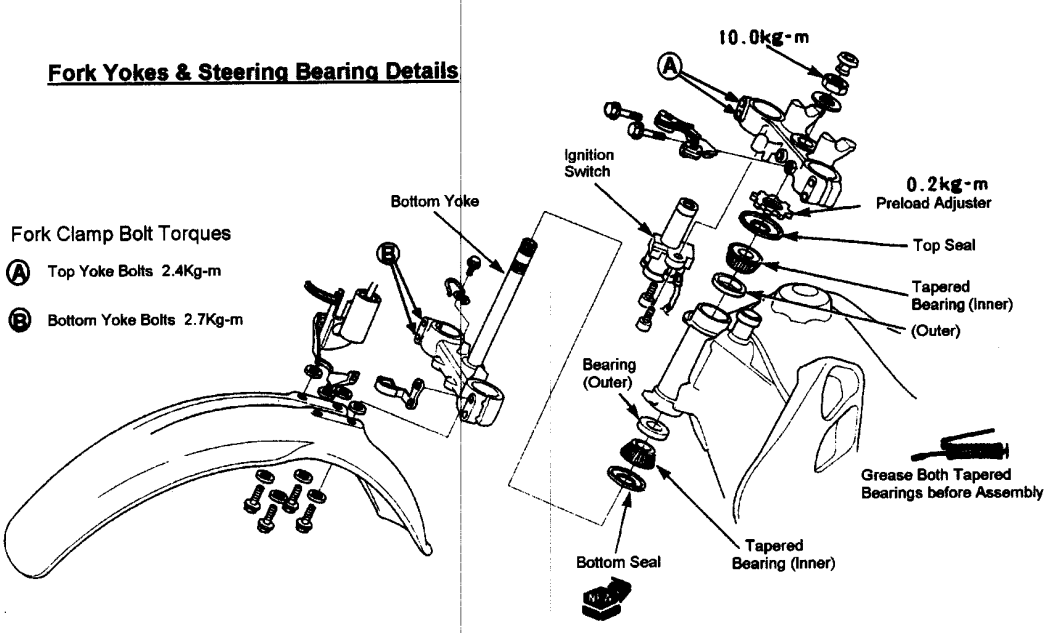


Mk 1 Suspension Arm Details

Swingarm Assembly



Fork Yokes & Steering Bearing Details

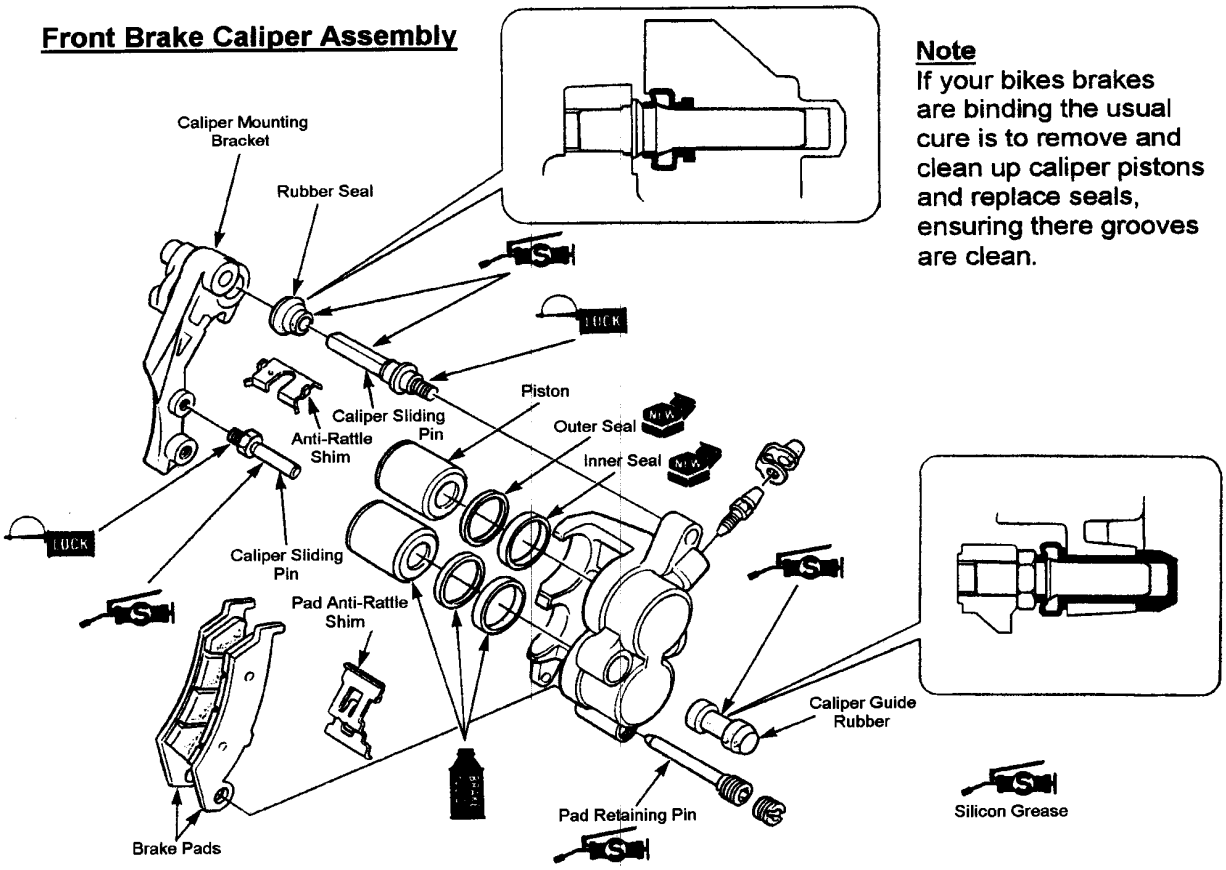


Fork Clamp Bolt Torques

Ⓐ Top Yoke Bolts 2.4Kg-m

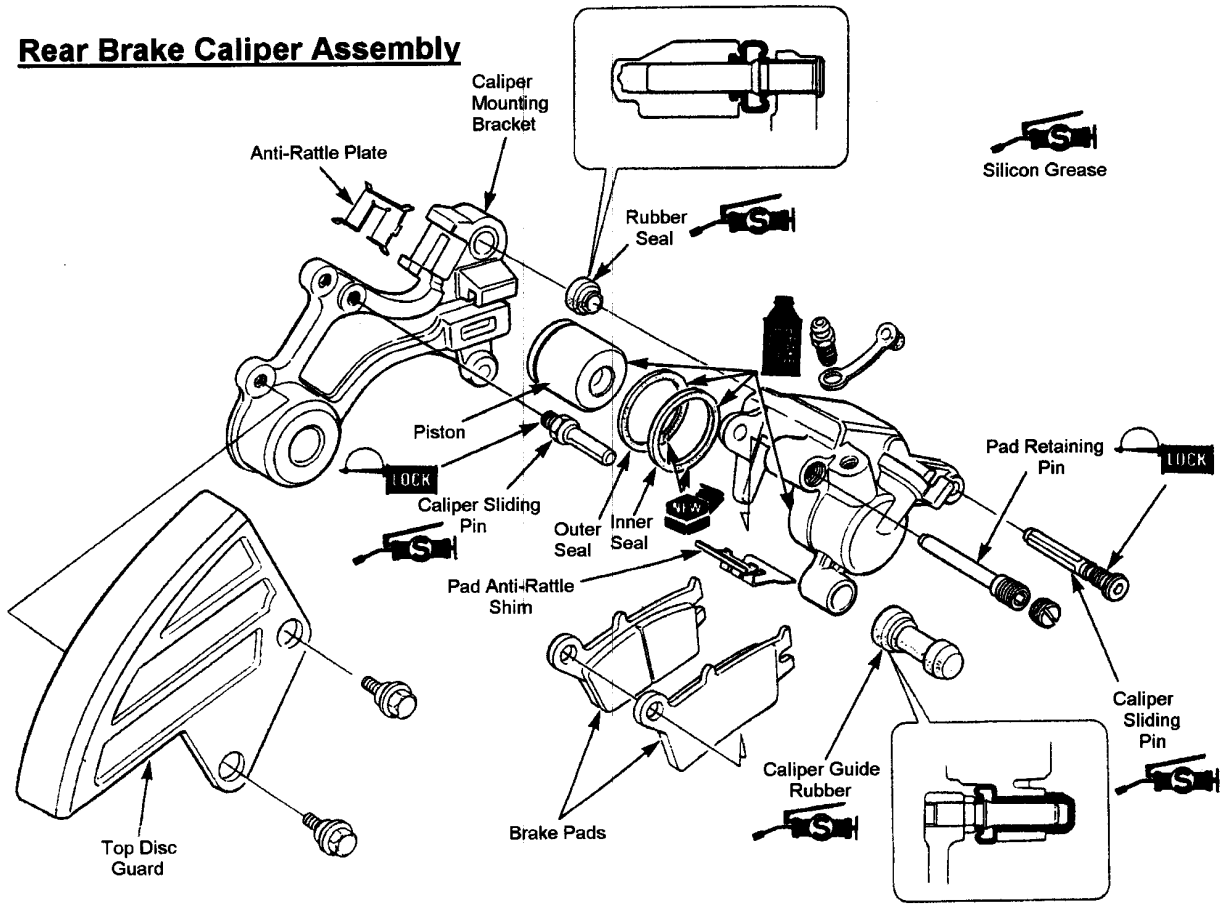
Ⓑ Bottom Yoke Bolts 2.7Kg-m

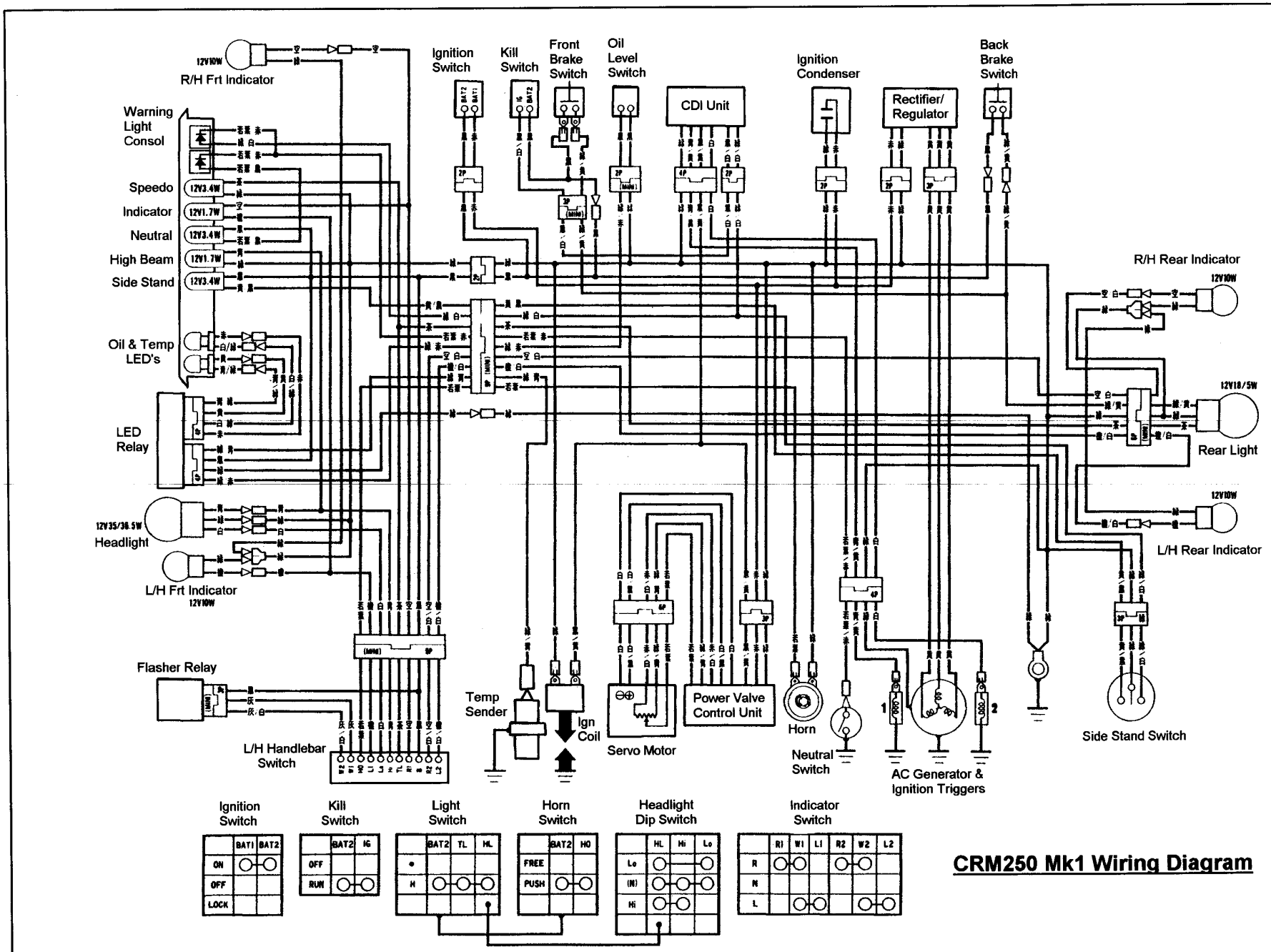
Front Brake Caliper Assembly

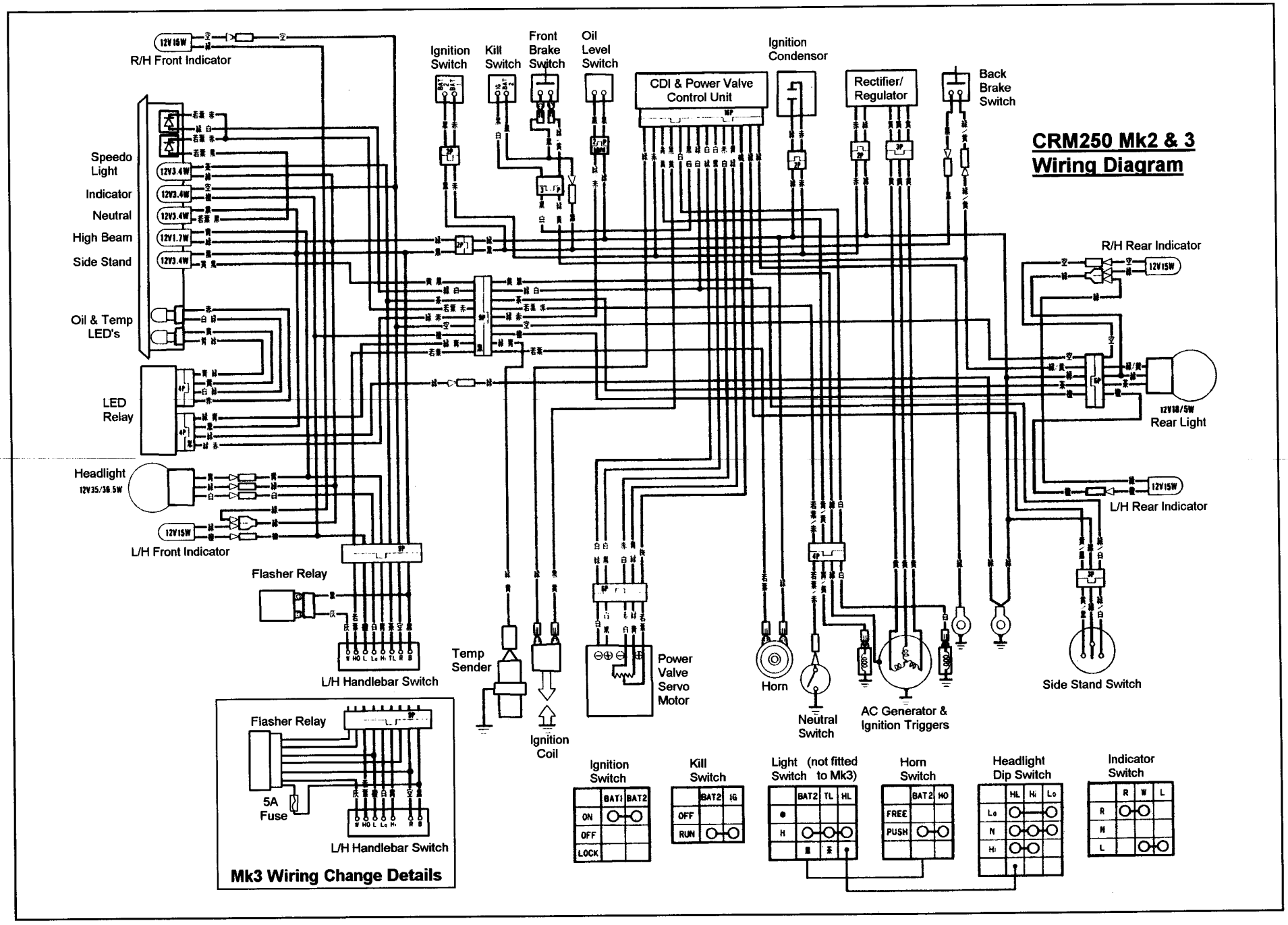


Note
If your bikes brakes are binding the usual cure is to remove and clean up caliper pistons and replace seals, ensuring there grooves are clean.

Rear Brake Caliper Assembly




12V10W
R/H Frt Indicator
Warning Light Consol
Speedo
12V3.4W
Indicator
12V1.7W
Neutral
12V3.4W
High Beam
12V1.7W
Side Stand
12V3.4W
Oil & Temp LED's
LED Relay
12V35/36.5W
Headlight
L/H Frt Indicator
12V10W
Flasher Relay
L/H Handlebar Switch
Ignition Switch
Kill Switch
Front Brake Switch
Oil Level Switch
CDI Unit
Ignition Condenser
Rectifier/ Regulator
Back Brake Switch
R/H Rear Indicator
12V10W
12V18/5W
Rear Light
12V10W
L/H Rear Indicator
Temp Sender
Ign Coil
Servo Motor
Power Valve Control Unit
Horn
Neutral Switch
AC Generator & Ignition Triggers
Side Stand Switch
Ignition Switch
BAT1 BAT2
ON
OFF
LOCK
Kill Switch
BAT2 IG
OFF
RUN
Light Switch
BAT2 TL HL
Horn Switch
BAT2 HO
FREE
PUSH
Headlight Dip Switch
HL Hi Lo
Lo
(N)
Hi
Indicator Switch
R1 W1 L1 R2 W2 L2
R
N
L
CRM250 Mk1 Wiring Diagram


CRM250 Mk2 & 3
Wiring Diagram
R/H Front Indicator
Ignition Switch
Kill Switch
Front Brake Switch
Oil Level Switch
CDI & Power Valve Control Unit
Ignition Condensor
Rectifier/ Regulator
Back Brake Switch
Speedo Light
Indicator
Neutral
High Beam
Side Stand
Oil & Temp LED's
LED Relay
Headlight
12V35/36.5W
L/H Front Indicator
Flasher Relay
L/H Handlebar Switch
R/H Rear Indicator
12V18/5W
Rear Light
L/H Rear Indicator
Side Stand Switch
Temp Sender
Ignition Coil
Power Valve Servo Motor
Horn
Neutral Switch
AC Generator & Ignition Triggers
Mk3 Wiring Change Details
5A Fuse
Ignition Switch
Kill Switch
Light Switch (not fitted to Mk3)
Horn Switch
Headlight Dip Switch
Indicator Switch

Remember

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