HARLEY-DAVIDSON V-ROD SUPERCHARGER KIT
(PATENT PENDING)

INSTALLATION INSTRUCTIONS

SPECIFICATIONS AND MAINTENANCE

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IMPORTANT INFORMATION

PRODUCT WARNING

Installation of the Sprintex® Supercharger kit may void all or parts of Harley-Davidson’s warranty. Customers should consult their Harley-Davidson dealer for details. Your Sprintex® Supercharger Installation can only be carried out by an Authorised Sprintex® Approved Supercharger Specialist.

Sprintex makes no representation that installation and use of the Sprintex Supercharger kit is legal for road use worldwide. Customers should check that installation and use of the Sprintex Supercharger kit is legal in by contacting the relevant statutory authority in their jurisdiction.

Provided in this installation manual are detailed instructions to the installer on how to install the Sprintex® patent pending supercharger kit to the Harley-Davidson V-Rod. The instructions are aimed at being simple yet informative, and are aided with well presented pictures to make installations as simple, fast, and problem free as possible. Please read the entire instruction manual prior to beginning the installation procedure. Pictures and descriptions may vary slightly from model to model.

It is recommended that all wiring harness connectors, and vacuum hoses are labelled at the time of removal for easy and correct refitting. Some components that are removed and are to be refitted are fragile, and should be stored safely to prevent damage to these components.

Sprintex recommends performing the following vehicle checks prior to installing the supercharger. 1) Check that the factory fuel system is operating correctly. 2) Inspect the factory exhaust catalyst for blocks or damage, and 3) Check fuel quality in fuel tank ensuring that it is not stale or low octane fuel. Replace with a higher octane, 93OCTANE Premium Unleaded Gasoline/Fuel as required. It is also recommended to replace the fuel filter if the vehicle has travelled more than 15,000Kms.

Sprintex will not be liable for any loss, damage, payment, costs, expenses or other liability, not expressly stated in this document. In particular, Sprintex shall not be liable to any person for any consequential, indirect or economic loss or punitive or exemplary damages of any kind.

Sprintex reserves the right to change specifications from time to time and will not be liable to any person for doing so. Sprintex believes that information in this document is correct at time of print. Sprintex limits its liability to the maximum extent permissible at law with regard to the reliance which any person places on anything in this document.
SAFETY WARNING

Your Sprintex® Supercharger Installation can only be carried out by an Authorised Sprintex® Approved Supercharger Specialist. No unauthorised service or alteration may be undertaken to the Sprintex® Supercharger. Installation should be carried out in a workshop which is a safe, ventilated working environment with equipment and procedures compliant with local authority guidelines and legal requirements. Authorised Sprintex® Approved Supercharger Specialists are required to hold current worker’s injury insurance. Installers should ensure adequate hearing, eye, and physical protection is used at all times during the installation process. Installers should take reasonable precautions to avoid fatigue and closely follow the installation instructions during every installation. Sprintex recommends installation should not be carried out unsupervised. Sprintex, its directors, employees and agents will not accept liability for damage accident or injury resulting from the installation process. Safety warnings are provided throughout this document indicated by a 🟢.

WARNING

THIS SPRINTEX® INSTALLATION REQUIRES A STANDARD HARLEY-DAVIDSON FACTORY ECU CALIBRATION TO BE INSTALLED PRIOR TO THE INSTALLATION OF THE SPRINTEX® SUPERCHARGER KIT®. FAILURE TO ENSURE THIS WILL AFFECT THE PERFORMANCE AND MAY VOID YOUR WARRANTY.

SHOULD YOU BE UNSURE RETURN YOUR MOTORCYCLE TO YOUR NEAREST HARLEY-DAVIDSON DEALER TO ENSURE THE STANDARD CALIBRATION HAS BEEN REINSTATED AND IS OPERATING CORRECTLY.

 Smithsonian® SAFETY WARNING!

Do not start or run your Sprintex Supercharged V-Rod without the Belt cover installed – Belt or pulley failure without the Belt cover installed may result in injury, accident or death.

Sprintex supports safe riding so always remember to observe all speed limits and road rules relevant to your state or city. Always wear appropriate safety equipment when riding.

WARNING: Fitment of this kit to your Harley-Davidson V-Rod may affect the manufacturer’s warranty. Customers in doubt should check with their Dealer. Sprintex does not warrant that purchase, use or installation of this kit is legal for use worldwide. Customers should refer to their statutory authority in their local jurisdiction prior to using this kit for public road use.
WARRANTY
MUST BE INSTALLED BY AN AUTHORISED SPRINTEX® APPROVED
SUPERCHARGER SPECIALIST

1. WARNING
Your Sprintex® Supercharger Installation can only be carried out by an Authorised Sprintex® Approved Supercharger Specialist. No unauthorised service or alteration may be undertaken to the Sprintex Supercharger kit® or standard motorcycle Specification. Any modification or alterations from the Sprintex or Harley-Davidson specification will void your Warranty.

2. FUEL SPECIFICATIONS V ROD®
Minimum 93OCTANE Premium Unleaded Gasoline/Fuel

3. SUPERCHARGER BELT AND PULLEY
Must be inspected at every routine service and the belt replaced when required.

4. OIL SPECIFICATION (ENGINE ONLY)

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<td>Excellent</td>
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<tr>
<td>HD Multigrade</td>
<td>SAE20W50</td>
<td>HD360</td>
<td>Above 40°F (4°C)</td>
<td>Good</td>
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5. SPRINTEX V ROD SUPERCHARGER
The Sprintex V Rod Supercharger kit warranty provides a guarantee against any manufacturing defect in the parts supplied during the warranty period, 12 months from the date of purchase or 20,000 Kms, whichever occurs first. The warranty guarantees the replacement of any parts of the Supercharger Installation which fail as a result of a manufacturing defect in normal operating conditions and excludes circuit racing, speed trials, drag racing and any form of motor sport activities. In addition, any unauthorised alteration to the motorcycles original specification or failure to meet the approved service requirements will affect your warranty. To make a claim contact your Authorised Sprintex® Approved Supercharger Specialist

6. EXCLUSIONS
The following items will void your Sprintex Warranty:
   a. Alteration of the Sprintex® Supercharger kit from standard specification
   b. Unauthorised Service or repair works
   c. Fitting of non Sprintex approved replacement parts
   d. Use of non standard air filter
   e. Installation by a person who is not an Authorised Sprintex® Approved Supercharger Specialist

7. LIMITATION OF LIABILITY
Except to the extent that a warranty is imposed by an applicable law and cannot be excluded, Sprintex gives no other warranty either express or implied as to any matter whatsoever concerning the Sprintex® Supercharger. Sprintex limits its liability under any such warranty to the maximum extent permitted

*THIS WARRANTY IS NOT TRANSFERABLE*
CHANGES TO FACTORY SPECIFICATIONS

FUEL: MINIMUM 93 OCTANE PREMIUM UNLEADED GASOLINE/FUEL TO BE USED AT ALL TIMES. NEVER ALLOW THE ENGINE TO KNOCK OR DETONATE AS SERIOUS ENGINE DAMAGE MAY OCCUR.

SPARK PLUGS: NGK DCPR9E SPARK PLUGS. PLUG GAP TO BE SET TO 0.62mm/0.025”.

REQUIRED SERVICE: (SEE MAINTENANCE SECTION OF MANUAL)
1. INSPECT SUPERCHARGER DRIVE BELT AT EVERY ROUTINE SERVICE AND REPLACE WHEN REQUIRED.
2. CHECK SUPERCHARGER OIL LEVEL AT EVERY ENGINE OIL SERVICE.
3. DRAIN AND REPLACE SUPERCHARGER OIL AT EVERY SPARK PLUG SERVICE. IT IS REQUIRED TO REMOVE SUPERCHARGER TO CHANGE OIL AND REMOVE SPARK PLUGS. USE REDLINE 75W/90 HIGH PERFORMANCE FULLY SYNTHETIC GEAR OIL OR EQUIVALENT. IT IS CRITICAL NOT TO OVERFILL SUPERCHARGER GEARBOX AS DAMAGE WILL OCCUR. ONLY FILL UNTIL OIL DRAINS FROM LEVEL PLUG AT BOTTOM EDGE OF SUPERCHARGER GEARBOX COVER.

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## PARTS SUPPLIED

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V-ROD SUPERCHARGER KIT®

SECTION 1

DISASSEMBLY INSTRUCTIONS
1. Preparation

1.1 Ensure bike is located in a secure position. Sprintex recommends to avoid injury you should secure the bike on a scissor lift or similar bike stand using straps at anchor points provided.

2. Purging Fuel System

**SAFETY WARNING:** Fuel system is under high pressure. To prevent uncontrolled fuel spray during installation, it is required to purge the system of high pressure fuel. **INADEQUATE SAFETY PRECAUTIONS COULD RESULT IN PERSONAL INJURY OR DEATH.** ENSURE NO POTENTIAL OF EXTERNAL IGNITION SUCH AS NAKED FLAMES, WELDING OR SPARKS ARE OCCURING IN THE VICINITY PRIOR TO COMMENCING THIS PROCEDURE. YOU SHOULD ENSURE YOU ARE WEARING EYE PROTECTION AND LOW COMBUSTIBLE CLOTHING PRIOR TO COMMENCING THIS PROCEDURE. IT IS RECOMMENDED TO KEEP AN APPROPRIATE TYPE OF FIRE EXTINGUISHER READILY AVAILABLE.

2.1 Unlock seat.

2.2 Disconnect fuel module connector from fuel tank top plate (1).

2.3 Start engine and allow to run.

2.4 When engine stalls, continue to turn engine over for approximately 3 seconds using the starter to remove any fuel pressure from the fuel lines.

**SAFETY WARNING:** Allow engine to cool prior to proceeding with disassembly to prevent scalding.
3. Maxi-fuse Removal

3.1 **SAFETY WARNING:** ensure the bike is not running and the ignition key is in the off position for the remainder of the disassembly procedure.

3.2 Remove fastener (1) and remove RH side battery cover (2).

3.3 Remove maxi-fuse and store safely.

4. Air box And Air Filter Removal

4.1 Remove air box cover by turning retaining fastener ¼ turn counter clockwise. Pull air box cover away from locating holes.

4.2 Place cover in a safe place away from potential damage.
4.3 Remove connector from Intake Air Temperature Sensor (IAT) (1). The sensor will be used later in the installation.

**NOTE:** Earlier models have the sensor located on the engine, and the removal will be described later in the manual.

4.4 Unclip 8 clips retaining air box top, and remove air box top. There are three clips on each side, one on the front and one at the back.

4.5 Remove wing-nut securing air filter and remove air filter from air box.

4.6 Disconnect breather hose (1).

4.7 Slide O-rings up velocity stacks and remove 3 cap screws securing each stack (2)

4.8 Remove velocity stacks.
4.9 For models with moulded breather hoses, front breather hose is a press fit, and disconnects when air box base is lifted. Rear breather needs to be disconnected from oil/air separator and pushed out of air box base. Lift base to remove.

4.10 For other models, the front breather is retained by a worm clip, loosen clamp. Rear breather is secured to air box bottom with a worm clip. Loosen clamp, disconnect hose and remove air box bottom.

4.11 Cover the throttle body intakes to prevent contaminants/objects from falling down the throttle bores.

5. Battery Removal

NOTE: Always disconnect negative battery cable first. This prevents possible shorting and potential battery damage.

5.1 Remove negative terminal bolt first (1), then remove positive terminal bolt (2).

5.2 Remove battery cable clip (3) and remove battery.
6. Horn Removal

6.1 Remove acorn nut and washer securing horn to chassis.

6.2 Disconnect two wires from rear of horn and place horn in a safe place.

7. Throttle Body Removal

7.1 Disconnect throttle position sensor connector (2).

7.2 Disconnect idle air control (IAC) motor connector (1).
7.3 Loosen clamps securing throttle body. (Rocker-covers shown removed)
7.4 Remove throttle body by gently rocking whilst pulling upwards.

**NOTE:**
After removing throttle body, tape up inlets with tape to prevent debris from falling into engine risking engine damage.

7.5 Remove throttle cable housings from guides at throttle body and remove cable barrels from throttle cam.

---

8. **Coolant Removal**

8.1 **SAFETY WARNING:** Allow cooling system to cool prior to commencing this procedure. Ensure you are wearing appropriate protective clothing to prevent scalding. When removing pressure cap use a cloth to prevent spillage and scalding.

8.2 Using a cloth over pressure cap, turn ¼ turn counter clockwise to safety stop and allow pressure to relieve. Remove cap once pressure has escaped.
8.3 Remove LH radiator cover, by removing 5mm button head screw from underside of cover, and lifting gently.

8.4 Place container under radiator and remove radiator drain plug (1) and allow coolant to drain completely.

8.5 Once coolant has completely drained, replace radiator drain plug. Tighten plug to 9-11Nm.

9. Engine Oil and Filter Removal

9.1 Remove oil filler plug/dipstick on left hand side of engine.

9.2 Place a suitable container under oil drain plug at front of oil pan on left hand side.

9.3 Remove engine oil drain plug and allow oil to drain completely.

9.4 Once oil has drained completely, install drain plug and tighten to 35Nm (25.8ft/lb)
NOTE:

It is recommended, but not compulsory to change the oil filter.

9.5 Remove engine oil filter using the Oil Filter Wrench HD-44067.

9.6 Clean filter sealing surface on engine.

9.7 Lube seal on new oil filter, and install new filter. Tighten filter 2/3 to 1 turn after the filter’s seal has contacted the mounting surface.

10. Primary Drive Cover Removal

10.1 Remove three cap screws securing primary drive cover and remove cover.
11. Exhaust System Removal

11.1 Loosen upper muffler clamp (11).

11.2 Remove the two fasteners (32) holding the upper muffler (31) to the lower muffler (30).

11.3 Slide upper muffler rearward separating from auxiliary volume (12).

11.4 Remove both heat shields (1, 7) from front and rear header pipes (3, 9)

11.5 Remove hex-nut (25) and pin (21) on exhaust support bracket.

11.6 Remove fasteners (18) and (28) securing auxiliary volume and muffler to the exhaust support bracket. Note location of L bracket when removing (18).

11.7 Remove three 5mm cap screws from right hand side drive sprocket cover and remove cover.

11.8 Remove four hex nuts (2) securing front and rear headers to cylinder heads.

11.9 Remove header pipes with the auxiliary volume and lower muffler all attached. Lift and adjust the assembly until header pipes slide out and away from the cylinder heads.
NOTE: To maintain the alignment of all the components, keep the lower muffler, auxiliary volume, exhaust clamp and the front and rear header pipes firmly connected.

12. Coolant Hose Removal

12.1 Loosen and remove hose clamp (4).
12.2 Loosen and remove cap screw (7) securing P-clamp (8) to engine. Remove P-clamp.
12.3 Loosen hose clamp (12) at bottom of hose connected to water pump.
12.4 Using a thin screwdriver, loosen hose clamp (12) and pull hose (13) off radiator.
12.5 Remove engine coolant pipe (2) with hose (21).
13. Water Pump Removal

13.1 Unbolt 6 water pump cap screws and remove water pump cover.
13.2 Remove the water pump insert.

13.3 Using a soft mallet, tap on side of water pump to break seal.

13.4 Remove water pump by gently pulling outwards.

NOTE:
Ensure to remove water pump gasket which fits between water pump and crankcase, and discard. DO NOT RE-INSTALL THIS GASKET.
V-ROD SUPERCHARGER KIT®

SECTION 2

MODIFICATION INSTRUCTIONS
1. Fuel System Modification

**SAFETY WARNING:** Residual pressure may be released when the fuel system check valve is removed. You should ensure you are wearing appropriate protective face and body clothing and take steps to minimise spillage and fire. Avoid being in the potential path of the fuel release.

1.1 Remove fuel system check valve from fuel injector body.

1.2 Route supplied fuel hose, Bag 10, under fuel injector body from left hand side of engine.

1.3 Set aside supplied fasteners and washers for later use.

1.4 Lift fuel hose up past chain tensioner bolt and leave hanging as pictured.
1.5 Ensure supplementary injector hat is aligned as shown in picture. (Brass fitting at front side of hat).

1.6 Using supplied banjo bolt and 2 5/16" copper washers secure to fuel system check valve location as indicated. Tighten bolt to 11Nm/8.3ft/lb

2. Intake Air Temperature Sensor Removal.

NOTE:
Certain models have intake air temperature sensor (IAT) located on RHS of front cylinder. Other models have IAT located on air filter box.

2.1 For models with IAT in air box lid, carefully remove and set sensor aside.
2.2 For models with IAT in cylinder head, remove intake air temperature (IAT) sensor connector.

2.3 Remove screw and bracket.

2.4 Pull IAT from cylinder and set sensor aside.

2.5 Using supplied replacement stopper, Bag 2, previously removed screw and bracket, secure stopper to IAT sensor position on cylinder.

3. Breather Modification

NOTE:
For early model V-Rod’s, where rocker cover breathers are ½” rubber hose, the breather system needs to be modified. This breather type is pictured.
3.1 For later models using softer 5/16” moulded hose, the breather system does not need to be modified. However, the front rocker cover breather will need to be refitted to the supercharger assembly, as described later in this section. (Breather hose pictured). The rear rocker cover breather will also need to be removed from the air box and refitted to the rear rocker cover breather outlet.

**For ½” Rubber Hose Breather Model.**

3.2 Remove standard breather hoses.

3.3 If press fit steel insert from front breather comes out of its location with the breather hose, remove from breather hose and refit into rocker cover using 680 Loctite® or similar locking agent.

3.4 For rear cylinder, insert supplied 5/16” hose (270mm) (Bag 9) into rear breather fitting until abutment against restrictor, or if no restrictor, mark hose and insert 30mm (1 3/16”).

**NOTE:**

It is important to clean the outer surface of the breather hose with brake cleaner as the heat shrink used in the following steps is adhesive lined, and needs to seal properly on the breather hose.
3.5 Slide over supplied (40mm) heat shrink Bag 9 and align as pictured.

3.6 Gently heat shrink with heat gun until breather hose is secured in place. Do not use naked flame on heat shrink as it may damage or melt the heat shrink.

3.7 Repeat for front cylinder using supplied 150mm long 5/16” hose, Bag 9.

3.8 Ensure heat shrink is fitted correctly to each hose. Do not use naked flame on heat shrink as it may melt.

3.9 Breather hoses will later be fitted to supercharger plenum fittings.

For 5/16” Moulded Breather Model

3.10 Remove front cylinder moulded breather hose from oil air separator in air box base.

3.11 Press moulded breather hose out through base of air box to remove, and set aside.
3.12 Fit removed breather hose to breather bracket and fitting on supercharger as pictured.

3.13 Secure breather hose to brass fitting using supplied cable tie.

3.14 Ensure breather hose is correctly located in breather bracket, and not kinked at any point.

4. Breather Bracket Removal

4.1 If the engine breather is of the early model type, the breather bracket is no longer required, and needs to be removed from the supercharger kit’s plenum.

4.2 Remove two M4x8 button head screws and remove bracket.

5. Spark Plug Replacement

5.1 Lift fuse box off retaining bracket at rear of engine.

5.2 Remove front and rear coil fasteners.

5.3 Detach coil connectors

5.4 Pull coil and boot assembly straight up to disconnect spark plug.
5.5 Remove spark plugs using correct spark plug socket

NOTE:
Check spark plug gaps on supplied spark plugs, Part No. DCPR9E, are set to 0.62mm/0.025”.

5.6 Install new plugs and tighten to 23Nm (16.9ft/lb).

5.7 Install coil and boot assemblies over plugs with wiring connector facing rear of motorcycle.

5.8 Insert coil fasteners with longer fastener used on left hand side. Tighten fasteners to 9.7Nm (7.2ft/lb).

5.9 Connect connectors to coils.

6. Throttle Body Disassembly

6.1 Remove two security screws (1) securing Throttle Position Sensor to throttle body. Remove sensor and set aside.
6.2 Remove countersunk screws securing TPS plate to throttle body.

6.3 Using a heat gun, gently heat Idle Air Control screws (1) to break Loctite® patch and remove screws.

6.4 Pull IAC and O-ring from throttle body. Set IAC aside.

6.5 Remove circlips from the three posts shown.

6.6 Remove two washers from lower two posts.
6.7 Take note of spring tail location on throttle swing arm.

6.8 Remove bush from throttle assembly.
6.9 Disconnect throttle arm from top post.

6.10 Remove throttle swing-arm by rotating front throttle shaft clockwise and lifting upwards.
6.11 Remove swing-arm spring and spring carrier.
6.12 Heat security screws securing swing arm plate and remove screws.

6.13 Heat security screw securing cable guide to throttle body and remove guide.

**NOTE:** Some butterfly screws have been staked /peened on the backside, and will need the protruding portion of the thread ground off with a die grinder or similar prior to removal.

6.14 Heat front butterfly screws with a heat gun.

6.15 Remove front cylinder butterfly from standard throttle body assembly by removing the 2 security fasteners. Be careful not to damage them as they are to be reused.
6.16 Remove circlips securing front throttle shaft ensuring that not to damage the nylon washer.

6.17 Remove nylon washer from front throttle shaft.

6.18 Remove throttle shaft and set aside.

7. Throttle Body Removal

NOTE 1:
It is easier to fit the previously removed throttle linkages to the Sprintex® supercharger kit with the supplied throttle body removed from the supercharger kit.

NOTE 2:
Note that the vacuum lines in the illustrations may differ from later installations, where hard nylon lines were used

7.1 Disconnect vacuum hose from bypass actuator as indicated at (1).

7.2 Disconnect breather hose from throttle body (2).
7.3 Disconnect vacuum line from 3/16” fitting as pictured.

7.4 Remove the 4 M5 cap screws securing bypass elbow to supercharger kit.

7.5 Remove the 5 M6 cap screws securing throttle body to supercharger kit, and remove throttle body.
8. Throttle Body Assembly

**NOTE:**
The throttle body now needs to be assembled using the previously removed throttle linkage components and throttle butterfly. This section may appear complicated and require practice to master.

8.1 Secure throttle linkage bracket on supercharger throttle body using 2 supplied M5x12 countersunk screws from Bag 2. Tighten to 6Nm (4.4ft-lb)

8.2 Insert throttle shaft and spring into supplied throttle body.

8.3 Ensure throttle return spring is temporarily located as pictured.

**NOTE:**
It is necessary to assemble the swing arm and throttle shaft at the same time, but for ease of description, the following pictures show the throttle shaft not installed.
8.4 Place swing arm plastic spring carrier and swing arm spring onto post and align as pictured.

8.5 Take careful note of the location of the spring ends.

8.6 Using previously removed swing-arm, insert swing arm spring tag through hole in between the two throttle cable barrel mounting holes as pictured.

8.7 Position swing-arm onto post, and rotate clockwise.

8.8 Gently push swing arm down, until the stop tag on the underside locates in the cut-out in the throttle body.

**NOTE:**

It may take some adjusting of the location of the plastic spring locator before the swing arm will sit down in its position properly.

8.9 Once swing arm is located properly it should look like the picture. The swing arm should have a light pretension on the spring, and should rest against its stop in the shown position.
8.10 As the throttle shaft should have already been installed, it is important that the swing arm is located over post as pictured.

8.11 Place washer over swing-arm post and secure assembly in position with previously removed circlips.

8.12 Insert previously removed bush, washer and circlips onto throttle arm post.

8.13 Rotate throttle return spring, and lift over post to position shown in picture.
8.14 Secure throttle shaft in throttle body using supplied E-clip from Bag 2 and nylon washer previously removed from throttle body.

8.15 Install throttle butterfly to throttle shaft using previously removed security screws.

**NOTE:** Ensure to use Loctite ® or similar locking compound to security screws prior to fitting.

8.16 Ensure throttle assembly rotates smoothly and returns to correct position.

8.17 Adjust the idle position of the throttle butterfly, by adjusting the screw on the throttle body to give a rest position of .003-.004” throttle plate clearance.

**NOTE:** It may be necessary to adjust this clearance after the installation if the engine does not idle properly. Too little clearance and the engine will want to stall. Too much and the engine will flair, taking time to return to desired idle speed.
9. Idle Air Control (IAC) Valve Installation

9.1 Insert IAC valve and O-ring into throttle body and secure with 2 supplied M4x12mm cap screws from Bag 2. Tighten screws to 3Nm (2.2ft-lb).

9.2 Ensure IAC is aligned as pictured.


10.1 Fasten throttle position sensor mounting plate to throttle body using 2 M5x12 supplied countersunk screws from Bag 2. Tighten screws to 6Nm (4.4ft-lb).

10.2 Ensure plate is fixed as pictured.

10.3 With connector facing side of throttle body as shown, verify that shaft pocket of TP sensor fits over shaft on throttle body.

10.4 Align holes in throttle body plate.

10.5 Fasten TPS to TPS mounting plate using supplied M4x12 cap screws from Bag 2. Tighten screws to 3Nm (2.2ft-lb).

10.6 Ensure that there is a light preload on the TP sensor when it is aligned as pictured. The TPS can be incorrectly mounted but still be aligned as shown, and will result in poor engine operation.
11. Intake Air Temperature Sensor (IAT) Installation

11.1 Press IAT sensor into throttle body as shown. Take care not to damage the o-ring.

12. Throttle Body Re-Installation

12.1 Apply a gasket sealant to the highlighted surface as shown in picture.

12.2 Loosely fasten throttle body to inlet manifold using previously removed cap screws and schnor washers. Ensure not to cross-thread screws which may permanently damage the manifold and affect performance.

1. M6x45
2. M6x55
3. M6x55
4. M6x65
5. M6x70
12.3 Apply Gasket Sealant to both contact surfaces of bypass elbow.

12.4 Fit bypass elbow and secure using previously removed fasteners. Do not tighten fasteners yet, just tighten enough for faces to contact throttle body and plenum top.

12.5 Gently tighten the five M6 cap screws securing throttle body to the intake manifold. Tighten to 10Nm (ft-lb).

12.6 Tighten 4 M5 cap screws securing bypass elbow to 6Nm (4.4ft-lb).

12.7 Connect breather line to bottom hose quick-fitting.

12.8 Top actuator must be connected to fitting furthest from IAT sensor, located on side of intake manifold.

12.9 Fitting next to IAT on throttle body, must be connected to lower actuator on other side of supercharger.

12.10 Ensure MAP line has not been accidentally disconnected from fitting on plenum top.
13. Joiner Block Fitting

13.1 From Bag 2, remove the joiner block, one M5x40 (1), one M5x65 (2) and two schnor washers.

13.2 Fit to base of supercharger plenum as pictured. Ensure that the front face of the joiner block is flush with, and square to the adjoining plenum face.

13.3 Fasten cap screws to 6Nm (4.4ft-lb).

14. Lower Actuator Connection

14.1 Remove circlips from check shaft arm.

14.2 Place actuator end over pin and secure in place with circlips. Ensure circlips is properly located in groove on pin.

15. Earth Bolt Removal

15.1 It is necessary to remove the rear rocker cover earth bolt, as this is used to mount the supercharger kit.

NOTE:
The earth straps will need to be mounted on top of the supercharger mount when refitted. Ensure that the horn earth wire does not fall off as it is not attached to the main wiring loom.
16. Wiring Loom Modification

NOTE:
Due to the relocation of some of the engine management sensors, it is required to install wiring loom extensions supplied in Bag 8.

**IAC Loom Extension (1)**
This loom is supplied with 4 white wires, labelled (A) through to (D).

**TPS Loom Extension (2)**
This loom is supplied with 3 coloured wires, with a break-out loom and connector.

16.1 Remove the plastic conduit from the IAC loom and TPS looms as pictured.

**IAC Loom Extension**

16.2 Factory IAC connector has letters on the plug defining each of the wires connected to it.
16.3 These will be connected to each of the wires on the supplied extension.
16.4 Cut wire (A) at IAC connector on factory loom.
16.5 Strip 10mm of the outer insulation.

16.6 Slide over supplied heat shrink from Bag 8.
16.7 Solder to the extension wire labelled (A) taking care not to touch the soldering iron against any other parts.

**SAFETY WARNING:** Ensure you are wearing appropriate protective clothing such as eye protection and gloves and follow manufacturers safety instructions prior to using a soldering iron.

16.8 Slide up heat shrink over soldered joint and shrink using a heat gun. Do not use a naked flame as heat shrink may melt.
16.9 Repeat steps 14.4-14.8 for wires (B)-(D).
IAC Loom Extension

16.10 Factory TPS connector has letters on the plug defining each of the wires connected to it.

16.11 These will be connected to each of the wires on the supplied extension as follows.

<table>
<thead>
<tr>
<th>Factory TPS</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Black/White</td>
<td>(A) Black</td>
</tr>
<tr>
<td>(B) Red/White</td>
<td>(B) Orange</td>
</tr>
<tr>
<td>(C) Grey/Purple</td>
<td>(C) Grey</td>
</tr>
</tbody>
</table>

16.12 Cut Black/White wire (A) at TPS connector on standard loom.

16.13 Strip 10mm of the outer insulation.

16.14 Slide over supplied heat shrink from Bag 8.

16.15 Solder to the Black extension wire (A).

16.16 Slide up heat shrink over soldered joint and shrink using a heat gun. Do not use a naked flame as heat shrink may melt.

16.17 Repeat steps 16.12-16.16 for wires (B)-(C) according to above table.
17. **Water Pump Drive Shaft Replacement**

17.1 Remove voltage regulator 3-wire harness connector clip from left side of radiator cover.

17.2 Unlatch cable clip on top of jiffy stand and remove alternator wiring harness.

17.3 Place drip pan under alternator cover to catch any remaining oil.

17.4 Remove 14 cap screws securing alternator cover.

17.5 Using 2 derby cover fasteners (3), position alternator stator cover remover/installer tool (HD-45304) (4) as shown.

17.6 Install two gasket alignment dowels (HD-45340) (2) in two of the alternator cover holes to steady cover as it is removed.

17.7 Remove alternator cover by pulling outwards. Beware of fingers as the cover is held in place by the alternator magnets.

**NOTE:** If cover removal tool and dowels not available, cover can be removed by levering at 2 lever points on the back side of the cover.

**SAFETY WARNING:** Be careful of fingers as the cover is held in place by the alternator magnets and may snap back into place if not removed carefully.
17.8 Holding crankshaft 36mm rotor nut with wrench, loosen triple sprocket fastener and remove. (Engine shown removed).

17.9 Attach Sprintex® drive shaft guide, Part No 201P9001, to engine at points indicated using 4 M6x16mm cap screws supplied with tool. Do not tighten bolts yet.

**NOTE:**
If this tool is not supplied with the Sprintex® supercharger kit. Please contact your national Sprintex® distributor for pricing.

17.10 Carefully insert Sprintex® drive shaft tool, Part No 201P9005, into shaft guide, inserting tool into triple sprocket.

17.11 When aligned correctly, tighten Sprintex® guide.
SAFETY WARNING: Prior to using the hammer, ensure you have reasonable footing to avoid slipping or falling. Also ensure the bike is well secured and will not fall over.

17.12 Gently tap drive shaft tool through triple sprocket, pushing out water pump drive shaft, and keeping triple sprocket in correct position.

NOTE:
DO NOT REMOVE DRIVE SHAFT TOOL FROM DRIVE SHAFT GUIDE. TRIPLE SPROCKET WILL SPRING OUT OF ALIGNMENT.

17.13 Thoroughly clean the shaft from Bag 4 with an air drying solvent paying particular attention to the threads in each end of the shaft.

Apply engine assembly lube to shaft bearing surfaces as indicated in picture.

17.14 Carefully insert replacement drive shaft from Bag 4, through crank case.
17.15 Align shaft with alignment carrier, and carefully tap new drive shaft through triple sprocket, gently pushing out alignment tool.

17.16 Ensure shaft is firmly fitted against crankcase bearing, and through triple sprocket. Remove alignment tool carrier and alignment tool.

17.17 Using a deep 22mm socket, secure driveshaft.

**NOTE:**
Do not use hex on end of drive shaft to secure drive shaft. Damage to the shaft may occur.

17.18 Install supplied triple sprocket bolt from Bag 4 and tighten to 77Nm (56.8ft-lb). Note that triple sprocket bolt is left hand thread.

**NOTE:**
Use Loctite® 222 or similar locking agent on triple sprocket bolt.
NOTE:
After installing driveshaft, ensure crankshaft turns freely, and drive shaft has a minimum 0.05mm/0.002” end float. Only rotate crankshaft in correct direction.

17.19 Using a new gasket, or using a sealant on the old gasket, carefully align and replace alternator cover.

**SAFETY WARNING:** Be careful of trapping fingers when replacing alternator cover. It will snap into position due to the magnets within the alternator body.

17.20 Fit all bolts to cover and tighten to 9.7Nm (7.2ft-lb) according to the procedure pictured.

17.21 Route stator wiring harness through cable clip and latch clip.

17.22 Plug stator connector into three wire voltage regulator connector.

17.23 Secure connector to left side of radiator cover with connector clip.
V-ROD SUPERCHARGER KIT®

SECTION 3

INSTALLATION INSTRUCTIONS
1. Drive Body Installation

1.1 Using supplied drive body from Bag 6. Apply a thin smear of sealant around points indicated.

1.2 Apply a thin smear of grease on the two o-rings on the drive body.

1.3 Ensure the original water pump gasket has been removed, and that the crank case surface is clean from debris and oil.

1.4 Apply engine lube along the length of the shaft at where the roller bearing and seal in drive body run.

1.5 Carefully insert supplied drive body into water pump drive housing, ensuring not to damage O-rings.

1.6 Secure drive body to engine using 6 supplied M6x16mm cap screws and 1 supplied M6x35mm cap screw and the supplied schnor washers from Bag 6. Tighten to 10Nm (7.4ft-lb).
2. Supercharger Brace Installation

2.1 Secure supercharger brace from Bag 5 to drive body at points indicated with 4 supplied M6x16mm cap screws and schnor washers from Bag 5. Tighten cap screws to 10Nm (7.4ft-lb).

3. Drive Pulley Installation

3.1 Fit drive pulley from Bag 7 to drive shaft. Use a small amount of Loctite® 680 or similar on the mating faces between the shaft and the pulley.

3.2 Secure drive pulley with supplied countersunk M10x25 bolt from Bag 4, and tighten to 52Nm (38ft-lb). Ensure to hold pulley by using a 36mm spanner across flats on hex centre.

3.3 Use Loctite® 222on drive pulley bolt, be careful not to apply to countersunk face of bolt head.

4. Cooling System Installation

4.1 Fit cooling assembly by fitting manifold to radiator and securing with previously removed hose clamp. Tighten clamp to 3-4Nm (2.2-2.9ft-lb).

4.2 Align cooling assembly with chassis upper chassis rail and front rail.
4.3 Attach electric water pump hose to drive body fitting using supplied hose clamp and tighten clamp to 3-4Nm (2.2-2.9ft-lb).

4.4 Locate radiator cap body from Bag 11 in pictured location.

4.5 Attach ½” hose to drive body using supplied hose clamp, Bag 11, and tighten to 3-4Nm (2.2-2.9ft-lb).

4.6 Attach radiator cap body to water manifold using hose clamp provided and tighten to 3-4Nm (2.2-2.9ft-lb).

4.7 Fasten previously removed P-clamp around both coolant pipes and secure to front rocker cover with fastener. Tighten fastener to 6-10Nm (4.4-7.4ft-lb).

4.8 Ensure no hoses are kinked and cooling assembly is properly located, not rubbing on any engine or chassis components.
4.9 Remove standard overflow hose from overflow bottle. Be careful as the overflow bottle can become brittle with age.

4.10 Using supplied overflow hose, Bag 11, connect hose to radiator cap body overflow fitting and to overflow bottle lid.

**Refilling Cooling System**

4.11 Loosen air bleed plug from top cooling system hose.

**SAFETY WARNING:** Ensure coolant does not make contact with other parts. Use a funnel and drop cloth to prevent damage.

4.12 Through new radiator cap body, fill cooling system with genuine Harley-Davidson extended life antifreeze & coolant up to lower sealing surface in radiator cap body.

4.13 Replace air bleed plug and tighten to 9-11Nm (6.6-8.1ft-lb). Top up coolant if necessary and replace radiator cap.

**5. Battery Installation**

5.1 Stretch rubber hold down strap over air box cover frame tabs as shown.

5.2 Slide battery back into battery box ensuring that the terminals are at the top. (Negative on left hand side).
5.3 Connect the positive lead and fasten using previously removed fastener. Tighten fastener to 6.8-10.9Nm (5-8ft-lb).

5.4 Do not connect earth lead yet.

5.5 Do not replace battery strap yet.
6. Supplementary Engine Control Unit Installation

1. Supplementary ECU.
2. Diagnostics Connector. To be connected to diagnostics plug on LHS of factory ECU.
3. TPS Connector. To be connected to break-out loom from TPS extension.
4. Earth Connector. To be connected to battery earth on rocker cover.
5. Water Pump Connector. Connected to water pump.

8. Injector Connector. Connect to front cylinder fuel injector.
9. Injector Connector. Connect to front fuel injector connector on factory loom.
6.1 Insert supplementary ECU and loom on top of battery as shown. (Insert with connectors first). Ensure wiring loom is located back out through battery hold down strap.

6.2 Move hold-down strap over battery and supplementary ECU to secure into position.

6.3 Undo battery earth cable from rocker cover.

6.4 Place earth connector from supplementary loom onto mounting bolt and refasten using the previously removed nut.

6.5 Ensure battery earth cable is located flush against the battery.

6.6 Remove connector from front cylinder fuel injector.

6.7 Connect supplementary loom male injector plug (9 in Figure 6.1) to factory front injector connector.

6.8 Connect supplementary loom female injector plug (8 in Figure 6.1) to front cylinder injector. (Not connected in picture for clarity).
6.9 Route water pump plug under injector body and connect to water pump.

6.10 Connect TPS connector (9 in Figure 6.1) to break-out connector on previously installed TPS extension.

6.11 Connect multiplug on supplementary loom to diagnostics multiplug located at LHS of battery.

6.12 Carefully mount connected wires to stable mounting points using cable ties.

6.13 Leave unconnected loom hanging over outside of top chassis rail to prevent damaging when installing supercharger kit.
7. Supercharger Installation

7.1 Carefully lubricate O-rings on supplied fuel injector, Bag 10, with rubber grease.

7.2 Insert inlet end of fuel injector into previously installed injector hat.

7.3 Connect supplementary injector connector from installed wiring loom, (connector 7 in figure 6.1), to injector. Align injector as shown, with connector facing downwards.

7.4 Throttle cables need to be re-routed through battery hold down strap, on RHS of supplementary control unit on top of battery.

7.5 If battery positive connector is unprotected, use plastic conduit to protect and prevent possible shorting.

7.6 Carefully place supercharger upside down over engine in position shown.
7.7 Fitting pull cable first, insert throttle cable barrel into swing arm as shown.

7.8 Fit outer cables to locating posts. Ensure throttle operates correctly, without sticking, and check to make sure full throttle can be achieved.

7.9 Carefully rotate swing-arm clockwise, and slip cable over swing-arm.

7.10 Whilst pulling on outer cable, slide inner cable under throttle shaft arm, over post and locate in slot in throttle cable post.

7.11 When located as shown release outer cable and allow to fit snugly in counter-bore in throttle cable post.
7.12 Fit throttle return cable barrel to swing arm.

7.13 Pull back cable outer and insert into throttle cable post.

**NOTE:**
It may be necessary to wind back the throttle cable adjustment at the grip to allow cable to extend back to cable post.

### Throttle Cable Adjustment

7.14 Turn the throttle adjusters, (2,4) and jam-nuts (3) as short as they will go. Both cables should have zero adjustment at the start of this procedure.

7.15 Ensure the front wheel is pointed straight ahead.

7.16 Turn the throttle grip wide open and hold it there.

7.17 Turn the throttle cable adjuster (2), lengthening the sleeve, until the throttle cam just touches the cam stop.

7.18 Tighten the adjuster jam-nut and (3) and release the throttle.

7.19 Turn the idle cable adjuster (4), lengthening the sleeve until the cable housing touches the spring on the cable support sleeve.

**SAFETY WARNING:** Check that the throttle control operates freely without binding. Irregular or sticking throttle response could cause a loss of control, leading to an accident which could result in death or serious injury.

7.20 Check adjustment.

- a. Work the throttle grip to be sure the cable returns to idle position when released.
- b. If the cable does not return to idle, turn idle adjuster, shortening the sleeve until correct adjustment is reached. Tighten the jam-nut (3)

**NOTE:** If the throttle is slow to return, ensure that the cables are located correctly and not twisted or bent too sharply. If the throttle is still slow, the cables will need to be oiled or replaced.
7.21 Carefully flip supercharger over.

7.22 Insert supplementary injector into base of inlet manifold.

**NOTE:**
Ensure that fuel injector connector points downwards as much as possible to prevent interference with throttle linkage.

7.23 If V-rod has early model breathers which have been previously modified; Push front and rear hoses over brass fittings on plenum chamber.

7.24 If late model breather (moulded), fit the rear cylinder breather to rear brass fitting, and secure with cable tie.

7.25 Carefully lower supercharger assembly and push front breather over the front cylinder rocker cover breather tube.

7.26 Fasten supplementary fuel injector to supercharger manifold using two M5x20 cap screws and two schnor washers from Bag 10. Tighten cap screws to 6Nm (4.4ft-lb).

7.27 Ensure injector connector points downwards as much as possible to avoid fouling on throttle linkage.
7.28 Connect electrical plugs to additional MAP sensor (1), IAC (2), TPS (3), and IAT sensor (4). (Supercharger kit shown installed).

7.29 Carefully mount supplementary loom securely to chassis rail or other stable mounting points.

7.30 Press supercharger down into inlets.

7.31 After ensuring supercharger is located properly, tighten inlet hose clamps to 3-5Nm (2.2-3.7ft-lb).

7.32 From RHS of bike, loosely fasten two M6x20 cap screws and two M6x16 cap screws, Bag 5, through brace and into supercharger assembly.
7.33 Using previously removed M10 cap screw; fasten supercharger support brace to rear rocker cover. Ensure to secure wiring loom earth and horn earth in between supercharger mount and rear cylinder head.

7.34 Tighten cap screw to 9.7Nm (7.1ft-lb).

7.35 Tighten two M6x20 and two M6x16 cap screws on RHS of bike to 10Nm (7.4ft-lb).

7.36 Connect the negative lead to battery, fasten using previously removed fastener, and tighten to the 6.8-10.9Nm (5-8ft-lb).

8. **Air Filter Fitting**

8.1 Remove belt tensioner from inside air filter.

8.2 Remove filter from protective cover.

8.3 Install filter to throttle body inlet.

8.4 Tighten hose clamp to 3-4Nm (2.2-3ft-lb).
9. Belt Tensioner Fitting

9.1 Fit supplied belt tensioner using one M8x45 cap screw and zinc washer from Bag 3 in location shown. Ensure spring tag sits properly in locating hole. To do this, apply pressure in a clockwise direction to the tensioner assembly while tightening the mounting bolt.

9.2 Tighten cap screw to 25Nm (18.4ft-lb).

10. Belt Installation

10.1 Route supplied drive belt, Part No. 4PK945 over bottom drive pulley and over supercharger pulley.

10.2 Using 15mm spanner rotate drive belt tensioner clockwise until belt can be routed as shown. The new belt will need to be levered over belt tensioner.

10.3 Release belt tensioner ensuring belt is correctly aligned on both drive pulleys.
11. Exhaust Refitting

11.1 Gently lift the lower muffler, auxiliary volume, and header pipe assembly into position.

11.2 Slip both front and rear header flanges over the studs in the cylinder heads. Thread two hex-nuts (2) on header flange studs. Do not tighten.

11.3 Install support pin (21) in isolator mount (23) on the exhaust support. Thread on the hex-nut (25). Do not tighten.

11.4 Hold a ½" spacer between frame rail and the header pipe exhaust clamp.

11.5 Thread in the lower muffler fastener (28) through the exhaust support.

11.6 Thread in the auxiliary volume fastener (18) through the L-bracket (24) and the exhaust support. Do not tighten.

11.7 Torque the pin hex nut to 23Nm (17ft-lb).

11.8 Place clamp (11) on upper muffler (31). Slide muffler over upper opening of auxiliary volume (12). Position clamp with compression fastener to inboard with tightening nut upward.

11.9 Thread upper muffler fasteners (32) into the lower muffler (30). Do not tighten.

11.10 Torque the fasteners to the indicated torque in the following order.

   a. Upper muffler clamp – 65Nm (48ft-lb)
   b. Upper muffler fasteners – 23Nm (17ft-lb)
   c. Lower muffler and auxiliary volume fasteners to support bracket – 23Nm (17ft-lb)
   d. Exhaust flange hex-nuts – 6-10Nm (4.4-7.4ft-lb)
11.11 Check the tightness of the exhaust clamp by the clamp nut to 32-37Nm (23.6-27.3ft-lb).

11.12 Replace front and rear heat shields. Tighten the heat shield screws to 10Nm (7.4ft-lb).

11.13 If removed, replace drive sprocket cover. Tighten to 6-10Nm (4.4-7.4ft-lb).

12. **Belt Cover Installation**

12.1 Fit belt guard using the supplied M6 cap screws and posts, Bag 15.

12.2 Loosely secure the cover at (1) with the 23mm post and M6x40mm cap screw.

12.3 Loosely fix the 40mm post and the M6x55mm cap screw at 2.

12.4 Fit remaining posts at (3 & 4) with two M6x75mm cap screws, and tighten all cap screws to 10Nm (7.4ft-lb) to secure belt cover.

13. **Fuel System Reconnection**

13.1 Reconnect fuel module (1).

13.2 Rotate rubber fuel tank cover to correct position.
14. Maxi-fuse Refitting

14.1 Replace maxi-fuse (3).

14.2 Replace RH side battery cover (2) and secure using previously removed fastener (1). Tighten to 10Nm (7.4ft-lb).

15. ECU Reset

15.1 It is necessary to complete a reset of the Turn Signal Module and the Security Modules.

15.2 Turn ignition key to ON position.

15.3 Push key in and turn a further position clockwise to ACC.

15.4 Wait 5 seconds for ECU to complete reset operation. Gauges will traverse full deflection and return to zero position. Reset is complete.
V-ROD SUPERCHARGER KIT®

SECTION 4

PRE TEST-DRIVE INSPECTION
1. Pre-Start Inspection

1.1 Ensure coolant is at correct level.
1.2 Ensure engine oil is at correct level.
1.3 Ensure throttle opens fully and returns to stop completely.

SAFETY WARNING: Ensure adequate steps are taken to prevent injury, spillage or fire should any of the required installation steps not have been carried out to specification.

2. Engine Warm Up

2.1 Start engine and allow to run until engine reaches normal operating temperature. (Engine may take a few attempts to start due to prior evacuation of fuel in fuel system).
2.2 Check for oil leaks around stator cover.

2.3 Check for coolant leaks throughout cooling system.
2.4 Check for fuel leaks from supplementary injector and banjo fitting.
3. **Air box Cover Refitting**

3.1 Position air box cover so that the locating pins on the frond align with the holes on the frame tabs above the battery and push pins into holes.

3.2 Fasten air box cover with previously removed bail head fastener and turn fastener ¼ turn clockwise to secure.

3.3 Push seat down and lock into position.
V-ROD SUPERCHARGER KIT®

SECTION 5

MAINTENANCE INSTRUCTIONS
1. Supercharger Drive Belt Replacement

1.1 Remove air box cover by turning retaining fastener ¼ turn counter clockwise. Pull air box cover away from locating holes.

1.2 Place cover in a safe place away from potential damage.

1.3 Remove belt guard by removing 4 M6 cap screws and mounting posts.

1.4 Using a 15mm spanner, rotate belt tensioner clockwise.

1.5 Lever belt away from tensioner and release.

1.6 Remove worn drive belt from top and bottom pulley and discard.
1.7 Route new Gates drive belt, Part No. 4PK945 over bottom drive pulley and over supercharger pulley.

1.8 Using 15mm spanner rotate drive belt tensioner clockwise until belt can be routed as shown. The new belt will need to be levered over belt tensioner.

1.9 Release belt tensioner ensuring belt is correctly aligned on both drive pulleys.

1.10 Fit belt guard using the previously removed M6 cap screws, posts and washers.

1.11 Loosely secure the cover at (1) with the 23mm post and M6x40mm cap screw.

1.12 Loosely fix the 40mm post and the M6x55mm cap screw at 2.

1.13 Fit remaining posts at (3 & 4) with two M6x75mm cap screws, and tighten all cap screws to 10Nm (7.4ft-lb) to secure belt cover.

1.14 Position air box cover so that the locating pins on the frond align with the holes on the frame tabs above the attery and push pins into holes.

1.15 Fasten air box cover with previously removed bail head fastener and turn fastener ¼ turn clockwise to secure.

1.16 Push seat down and lock into position.
2. Supercharger Oil Level Inspection.

2.1 Place bike on bike stand ensuring that the supercharger kit is perfectly level.

2.2 Remove fill plug from top of supercharger gearbox cover.

2.3 Remove level plug from side of supercharger gearbox cover.

2.4 Using Redline 75W90 high quality fully synthetic gear oil, or equivalent, add a small amount of oil to gearbox until oil drains through oil level plug on side of gearbox.

NOTE:
NEVER OVERFILL GEARBOX AS DAMAGE WILL OCCUR. ONLY EVER FILL TO LOWER OIL PLUG LEVEL.

3. Supercharger Removal

3.1 This is a reversal of the installation steps in Section 3. The necessary steps are as follows.
1. Remove air box cover.
2. Remove maxi-fuse.
3. Remove belt cover.
4. Remove belt.
5. Remove belt tensioner.
6. Undo bolts securing supercharger to brace.

7. Undo bolt securing supercharger to rocker cover.
8. Undo supplementary injector and remove.
9. Undo hose clamps at inlets.
10. Undo wiring connectors at IAC, TPS, MAP, IAT.
11. Remove air filter.
12. Remove breather hoses.
13. Remove throttle cables.
14. Remove supercharger assembly.
4. Supercharger Oil Replacement

4.1 With supercharger assembly removed from the bike, remove the top and bottom gearbox cover plugs.

4.2 Tilt supercharger to allow all oil to drain from gearbox. Allow to drain for several minutes.

4.3 Sit supercharger upright on a flat surface.

4.4 Using Redline 75W90 high quality fully synthetic gear oil, or equivalent, add a small amount of oil to gearbox until oil drains through oil level plug on side of gearbox (approximately 60mL).

NOTE:

NEVER OVERFILL GEARBOX AS DAMAGE WILL OCCUR. ONLY EVER FILL TO LOWER OIL PLUG LEVEL.

4.5 Refit oil drain plugs to gearbox and follow instructions in Section 3 to re-install supercharger kit.
5. Spark Plug Replacement

5.1 Remove supercharger kit as described above.

5.2 Replace spark plugs as instructed in Section 2, Modification Instructions, sub-section 6.

NOTE:
Ensure to use specified DCPR9E spark plugs with plug gaps set to 0.62mm/.025"

5.3 Re-install supercharger kit as described in Section 3, Installation instructions, sub-sections 7 to 16.