



*Total control at your fingertips*

## **GENERAL FITTING INSTRUCTIONS FOR BIKES WITH HYDRAULIC CLUTCHES FITTED AS STD**

**\*Note this unit should be fitted by a qualified motorcycle mechanic.**

**\*\*Wear Appropriate Safety Gear including Eye Protection and Gloves**

1. Using a suitable fast drying spray on solvent such as brakeclean, clean the area around the bikes STD clutch master cylinders hydraulic outlet fitting. Note it may be necessary to slide a rubber or plastic sheath back along the clutch hydraulic line in order to expose the master cylinders outlet fitting.
2. Undo the clutch master cylinder fitting and remove the clutch line from the master cylinder, try to keep the end of the clutch line as high as possible so as to avoid any loss of fluid. Also ensure no foreign material enters the clutch line.
3. Remove the STD clutch master cylinder from the handlebars.
4. Mount the CLAKE unit on the handlebars, it is recommended that a thread locking compound be used on the two m6 clamp screws. The top handlebar clamp mounting screw should be tightened first then the bottom screw. Note do not over tighten the bottom screw, ideally this should be just tight enough to prevent unwanted movement of the CLAKE on the handlebars but loose enough so as to allow the unit to rotate in the case of an accident.
5. Before you connect up the clutch line, ensure that the CLAKE you have fitted uses the same type of hydraulic fluid for clutch activation as does the motorcycle that you are fitting the unit to. There are two main types of fluids in common use in clutch systems, Brake Fluid and Mineral oil. These fluids are NOT compatible and serious damage could be caused by not using the correct unit and or fluid for your motorcycle. The type of hydraulic fluid used in the clutch system of the motorcycle should be marked on the top of the STD clutch master cylinder reservoir lid. On the CLAKE, with the unit mounted on the handle bars the reservoir closest to the handlebars is the clutch reservoir and the reservoirs lid has the appropriate fluid specified on it. If the fluid specified for the clutch system of the CLAKE is different to the fluid specified for the original clutch master cylinder do fit the unit, contact IMT Industries and they will advise on the modifications required. Also check that clutch hydraulic line has the correct size and type of fitting to suit the CLAKE clutch outlet. If incorrect an adaptor will be required. The CLAKE clutch outlet port has a M10 x 1 thread.

6. Remove the red plastic blanking plug out of the clutch outlet port, and connect the clutch line to the clutch outlet port on the CLAKE. (This is the m10x1 outlet that is in line with the handlebars.)
7. Rotate the CLAKE on the handlebars to a point where the reservoirs are horizontal.
8. Remove the two m4 countersunk screws holding the clutch reservoir lid to the CLAKE body. (the clutch reservoir is the one closest to the handlebars) **NOTE in order to prevent fluid contamination, under no circumstances should both reservoir lids be removed at the same time.**
9. Remove the clutch reservoir lid and diaphragm taking care to place them on a clean surface.
10. Remove the clutch bleed screw and sealing washer ( M4 allen CAP head on left hand side of body closest to the clutch reservoir ) taking care to place them on a clean surface
11. Using the correct fluid specified from a clean and previously unopened container fill the clutch reservoir to just below the top.
12. Pull the operators lever towards the handlebars and then return the lever to it's at rest position. Note the operator's lever will not return to the at rest position by itself and must be pushed back to this position. **WARNING!** Fluid may squirt out of the bleed screw hole or the reservoir, appropriate eye /face protection must be worn also all fluid spills should be cleaned immediately.
13. Repeat the operation described in step 12 whilst also periodically refilling the clutch reservoir in order to ensure that the clutch reservoir fluid level does not drop below a half full level.
14. Once a steady stream of fluid is caused by each operation of pulling the lever towards the handle bars, with the operator's lever in to the handlebars install and tighten the clutch bleed screw with its sealing washer.
15. Refill the clutch reservoir to just below the top.
16. Repeatedly pull the operator's lever into the handlebars and return it to it's at rest position until no air bubbles can be seen appearing in the clutch reservoir.
17. Ensure the operator's lever is in it's at rest position.
18. Repeat step 10.
19. Do not move the operators lever, fluid should now be slowly coming out of the clutch bleed port and possibly some small air bubbles. After these air bubbles have escaped allow the fluid to flow for approximately 10 seconds then install the clutch bleed screw with its sealing washer.
20. In most cases the clutch system will now be bled, however air may be trapped in the line in which case it will now be necessary to bleed the entire clutch system by following the instructions for bleeding the clutch system in the motorcycle's manual. Note when pumping fluid using the CLAKE it will be necessary to manually return the operator's lever to it's at rest position after each time the lever is pulled to the handlebars.

21. When the clutch system is fully bled the operators lever will return to it's at rest position if it is pulled towards the handlebars and then released.
  22. When the clutch system is fully bled, top up the clutch reservoir to within 5mm of the top of the reservoir, replace the diaphragm, the reservoir lid and tighten the two m4 countersunk screws.
  23. Wipe up all spilt or overflowed fluids. Using a suitable fast drying spray on solvent such as brakeclean thoroughly clean around both reservoir lids paying particular attention to the area where both lids are close to each other, this is to ensure that no clutch fluid contaminates the brake fluid
- (a) INSTRUCTIONS FOR CONNECTING AND BLEEDING THE BRAKE SYSTEM CLAKES WITH NO BRAKE PEDAL (FOR UNITS WITH BRAKE PEDALS SEE (b))**
24. Thoroughly clean around the hydraulic connection to the rear brake caliper.
  25. Remove the banjo bolt connecting the hydraulic line to the rear brake caliper and discard the two used sealing washers.
  26. Remove the rear brake pedal, rear brake master cylinder complete with hydraulic line, return spring and if applicable its reservoir and reservoir feed line.
  27. Rout the supplied brake line according to the individual model instructions.
  28. Ensure that the area around the rear brake caliper is clean.
  29. Using the supplied 10mm banjo bolt and the two supplied 10mm sealing washers (one on top of the banjo fitting and one below) connect the new brake line to the rear brake caliper.
  30. Remove the red plastic blanking plug from the brake outlet port located on the underneath side of the CLAKE body.
  31. Using the supplied 8mm banjo bolt and the two supplied 8mm sealing washers connect the brake line to the CLAKE.
  32. Check that both the brake and the clutch lines have sufficient free play and clearance by rotating the handlebars lock to lock making sure that at no time either line is pulled tight and making sure that the lines cannot become snagged on anything or jammed between objects such as the steering stops. Use the cable ties provided, to secure the lines together at appropriate places to ensure that the lines remain in this position.
  33. Remove the two m4 countersunk screws holding the Brake reservoir lid to the CLAKE body.(the brake reservoir is the second one away from the handlebars) **NOTE in order to prevent fluid contamination, under no circumstances should both reservoir lids be removed at the same time.**
  34. Remove the brake reservoir lid and diaphragm taking care to place them on a clean surface.
  35. Remove the brake bleed screw and sealing washer taking care to place them on a clean surface.
  36. Fill the brake reservoir to just below the top using dot 4 brake fluid from a clean previously unopened container.

37. Pull the operators lever towards the handlebars and then return the lever to it's at rest position..  
**WARNING!** Fluid may squirt out of the bleed screw hole or the reservoir, appropriate eye /face protection must be worn also all fluid spills should be cleaned immediately.
38. Repeat the operation described in step 33 whilst also periodically refilling the brake reservoir in order to ensure that the brake reservoir fluid level does not drop below a half full level.
39. Once a steady stream of fluid is caused by each operation of pulling the lever towards the handle bars, return the operator's lever to it's at rest position and install the brake bleed screw with its sealing washer.
40. The rear brake system can now be bled in a conventional manner via the bleed nipple on the rear brake caliper. Note for the CLAKE to operate properly it is vital to ensure that both the clutch and the rear brake systems are properly bled.
41. When the brake system is fully bled, top up the brake reservoir to within 5mm of the top of the reservoir, replace the diaphragm, the reservoir lid and tighten the two m4 countersunk screws
42. Wipe up all spilt or overflowed fluids. Using a suitable fast drying spray on solvent such as brakeclean thoroughly clean around both reservoir lids paying particular attention to the area where both lids are close to each other.

The CLAKE should now be ready for use.

**WARNING: READ THE OPERATING INSTRUCTIONS BEFORE USE  
THE CLAKE ALTERS THE CONTROLS OF THE VEHICLE  
THE OPERATOR SHOULD BE CAUTIOUS AND TAKE  
TIME TO FAMILIARIZE THEMSELVES WITH THE  
OPERATION OF THE UNIT.**