

**V-Twin Mfg.**  
**HITACHI STARTER KIT**  
**FITS 1971-1979 FXE 4 SPEED**  
**VT No. 32-0000 Black & 32-0007 Chrome**

**This is a custom application and rider safety depends on proper installation. This product should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.**

For 1971-84 FX 4 Speed models. Kit Includes Hitachi type starter, battery box, solenoid and related hardware, relay and wiring and complete instructions. Can be used on 1970-84 FLH models as a starter update. Replaces 33217-73. Your existing clutch drum should have a starter ring gear attached,. VT No. 18-1135 or purchase complete drum with ring gear attached VT No. 18-1134. Order battery, side cover top-strap separately. Installation of this kit takes approximately 2 1/2 to 3 hours.

**Instructions:**

1. Remove the seat. Disconnect the battery wires from the battery, Remove the ground wire first and discard, Remove the present battery strap, cover and battery from the motorcycle and discard.
2. Remove the present battery carrier and battery carrier lower bracket. Remove rubber mount from batter carrier bracket and discard battery carrier and bracket. Retain rubber mount.
3. Remove starter cover plate, gasket end screws and discard.
4. Assemble starter mounting studs to primary chain case, by assembling two nuts tightened together on fine thread end of stud to allow installation with socket. After installation of studs, remove nuts.
5. Insert starter shaft gear into starter shaft housing.
6. Assemble oil deflector plate on starter mounting studs with O-ring flange toward left side of motorcycle.
7. Assemble starter to studs using lock washers and nuts. A slight amount of grease on the nuts will retain them in a socket to assist installation, Remove primary chain case cover, place pan under primary chain case to receive oil.
8. Remove starter solenoid hole cover and gasket and discard.
9. Remove oil tank mounting nuts and rubber mounts from frame brackets, Push tank to right side of motorcycle to gain access to shifter lever pivot bolt. Remove shifter lever pivot bolt from primary chain case.
10. Facing engine left side, position starter gear shifter lever behind starter ring gear and insert starter shaft through oil deflector into starter shaft housing, making sure that during insertion, gear shifter lever is engaged on starter shaft collar. Also make sure that the shaft fully seats into starter gear splines.
11. Assemble shifter lever pivot boll through chain case hole into shifter lever.
12. Assemble black rubber boot to solenoid plunger. Drive 3/4 roll pin into plunger shaft center hole. Insert long spring and plunger into solenoid. With space between solenoid and chain case assemble solenoid gasket to primary chain case using lock washers and bolts, making sure that solenoid plunger is inserted through shifter lever hole.
13. Assemble short spring on solenoid plunger securing with retaining cup and pin, making sure that retaining cup open side is away from spring, to prevent from falling out.
14. Assemble needle bearing into chain case cover, using suitable tool. Position thrust washer on end of starter shaft.
15. Assemble oil tank rubber mounts to frame brackets and secure oil tank to rubber mount using lock washers end nuts.
16. Assemble new battery carrier support bracket to transmission cover studs and starter motor stud using washers and nuts.
17. Assemble rubber mounts to frame down tube hole and battery carrier front side.
18. Position starter relay on battery carrier in rearward position to keep terminals from contacting starter motor and tighten.
19. Assemble battery carrier to oil tank using original bolts. Assemble nuts to rubber mounts.
20. Route wire between starter relay mounting and starter stud. Secure with nuts.
21. Assemble feed wire from starter button to small terminal on starter relay.
22. Position solenoid boot over ends of heavy black wires. Assemble both heavy black wires to starter solenoid terminals. Route wire from short solenoid terminal to starter terminal. Route wire from long solenoid terminal to battery positive terminal. Do not connect.
23. Route wire between starter relay and battery positive terminal location. Route wire between starter relay and starter solenoid small terminal. Solder the Jumper wire to the terminal on the "Run-off" switch. With the wire attached, solder the other end of the jumper wire to the start switch. Remove the tape from the lose wire in handlebar housing and solder it to the other terminal of the start switch. If there is no wire see service manual.
24. Install battery in carrier with positive terminal toward front of motorcycle, Remove screw from battery positive terminal and discard. Use longer screw included in kit to connect 4 wires to batter negative terminal and motorcycle ground bracket welded to the frame using bolt and lock washer.
25. Assemble battery cover to battery using strap. Reassemble seat to motorcycle.
26. For further information refer to the service manual.

VT No.	Qty	Item# & Description	VT No.	Qty	Item# & Description
12-0318	1	20 Chain housing needle bearing	32-9205	1	Starter wire kit
12-0934	1	BT starter motor retaining ring	32-7571	1	Solenoid plunger kit include below listed items
12-0317	1	Starter housing needle bearing			10 solenoid plunger boot

15-0290	1	BT starter oil deflector plate gasket		1	18 Solenoid plunger retainer
17-0509	1	4&5 BT starter deflector plate w/o-ring		1	11 Solenoid plunger
17-1504	1	21 Thrust washer		1	17 Solenoid Spring
17-1505	1	25 BT 4 speed starter shaft shift collar		1	15 Solenoid mounting spacer
17-1506	1	7 Starter fork arm bolt		1	13 Solenoid return
17-1507	1	8 Starter fork arm		1	16 solenoid mount gasket
17-1508	1	2 Gear starter motor shaft	1/4-20 x1/2	2	Counter sunk screw relay to battery box
17-0084	1	23 Shaft nut & spacer	1/4-20	5	Hex nuts for Iso mounts
17-0085	1	9 Starter shaft	1/4"	2	Nylocks
17-0088	1	Starter shaft spacer	5/16"	1	Washer Iso mounts to support bracket
28-0117	1	22 Rubber solenoid cover	5/16"	2	Washer support bracket to trans
28-0546	4	Iso-rubber mount 1/4"	5/16"	1	Lock washer support bracket to transmission
28-0623	1	Battery pads	5/16"x24	2	Nuts, support bracket to transmission
31-0164	1	Battery carrier bracket	1/4"	4	Lock washer, 2 for relay to battery box & 2 for solenoid spacer mount
32-0310	2	Replacement battery cables	1/4"-20	2	Hex nuts for battery box to relay box
32-0313	1	Replacement battery cables	3/8"	2	Lock washers solenoid and relay
32-0405	1	Starter switch only	3/8"	2	Jam nut hex for battery box to relay box
32-0408	1	Switch caps long button	#10	3	Lock washer ext. teeth solenoid & relay
32-0633	1	14 Starter solenoid	#10-32	3	Hex nut solenoid and relay
32-0639	1	24 Bendix Starter drive	5/16"	2	Lock washer housing to inner primary
32-0640	1	Starter relay	5/16"-18	2	Hex nuts relay
43-9121	1	3 Starter housing	1/4"-20x 1.5"	1	Hex head bolt housing to inner primary
32-7760	1	6 Black Hitachi starter complete	1/4"-20 x 7/8"	2	Hex bolt spacer mount
42-9912	1	1970-79 Battery carrier	1/4"	4	Split lock washer

## ELECTRIC START CONVERSION KIT WIRING DIAGRAM

