

# HOW TO USE by **wwag** .com



Product **Cannonball StealthStarter  
SSK-S Kick Drive  
Swingarm Frame**

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## Introductory Remarks

The StealthStarter Kick Drive starts the motor via the main gear shaft, clutch and primary drive.

The starter motor requires 12 V voltage.

If the original 6V charging system is still present, it must be converted. For this, the appropriate parts like alternator, regulator and ignition coil are necessary, as well as suitable illuminants.

The minimum battery requirements are 300 CCA (SAE) / 290 CCA (EN). This should be taken into account when selecting the battery.

Additionally required are:

- 16 mm<sup>2</sup> (AWG 6) battery cable
- standard automotive cable 1.5 mm<sup>2</sup> in various colours
- a starter button or ignition switch with start function
- a 30 A fuse for the charging cable of the regulator
- various crimp or solder contacts

The starter will not fit with pre-1965 transmission base plates that have the adjuster installed. The adjuster will have to be eliminated, the base plate rear must be trimmed (see photo). If you want to save your OEM base plate, WW 74-091 will be the part of your choice, as 1965 and later base plates will not fit with pre-1965 transmission cases.



## Scope of Delivery

- Starter motor
- Starter motor housing with integrated kick starter mechanism
- Starter relay
- Gaskets (2)
- Stud bolt extended (9)
- Panhead screws (2)
- Cable lugs for starter cable (5)
- Lock washer, main shaft nut
- Woodruff keys, main shaft (2)
- Kicker shaft, extended, with spacer
- Locking plate, starter wheel

## Additionally required are

- Release bearing WW 80-766 (1958-early 1975) oder 80-767 (late 1975-1984)
- Clutch release lever WW 80-769 (for 1958-1964)

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## **Please note the following as serious injuries can result in case of disregard:**

The Stealth Starter Kick Drive is designed for stock or nearly stock engines. High compression, big inches and kickback due to wrong ignition timing can destroy the gears.

The StealthStarter Kick Drive works directly on the transmission mainshaft.

Start the bike only in neutral! If any gear is engaged while applying the starter button, the bike will jump forward. Pulling the clutch will NOT help.

For the same reason, with engaged gear, you will no longer be able to push the bike backwards, even while pulling the clutch. The freewheel will lock instantly.

## **Preparation - Disassembly**

- Place the motorcycle on a lifting platform or other suitable lift.
- Disconnect battery ground cable, if necessary remove battery and battery cable.
- Removing the exhaust system
- Drain gear oil
- Remove the kicker cover



- Remove starter wheel from football shaft
- Remove the kicker coupling with puller from the main gear shaft.
- Remove release lever (models 1958-1964 only)
- Remove oil baffle plate
- Remove the stud bolt of the kicker cover from the gear unit housing.



## **Final Assembly**

Insert the extended studs of the kit with medium bolt adhesive into the gear housing and tighten.

### *Note:*

The studs of the 3 and 5 o'clock position can be replaced by the supplied pan-head screws. This creates more space for the exhaust tube of the rear cylinder.

Position the first kicker cover gasket.

Insert one or two keys with some grease into the grooves of the main shaft.

Place the starter housing with the pre-assembled starter on the stud bolts of the gear unit and the main shaft.

Make sure that the keys in the main shaft remain in position.

Place the lock washer on the main shaft and tighten the main shaft nut (50 ft-lbs), press the lock washer with a screwdriver against a hexagon surface of the nut.

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*Note:*

Some models may require modification of the oil lines.

Lubricate the original clutch push rod with and insert it into the main shaft, with a new release bearing installed.

*Note:*

The special release bearing WW# 80-766 or # 80-767 is not part of the scope of delivery and must be ordered separately.

Position the second kicker cover gasket.



Fit the starter pinion on the extended kicker shaft so that the pin of the pinion shows to the left, when the set screw bore in the shaft is facing to you, place the locking plate and tighten the nut (50 ft-lbs).

Place the kicker shaft spacer without set screw on the shaft and then the assembled kicker shaft in the transmission case, the stop on the kicker pinion placed against the stop in the case.

Mount the kicker cover and tighten nuts/screws.

Place first the thrust washer (use existing one) and then the kicker shaft spacer with set screw and slot on the kicker shaft. Tighten the set screw to 9 ft-lbs.

Place the kicker spring on the extended kicker shaft and hook it to the spring stud.

Mount the kicker arm.

Replace the clutch release arm (if needed the extended version WW 80-769).

Fill up gear oil (1.5 pts).

*Note:*

The extended release lever WW# 80-769 for models 1958-1964 is not part of the scope of delivery and must be ordered separately. Original one-piece kicker arms do not work with the StealthStarter Kick Drive System.

Check clutch play and adjust if necessary.

Mount the exhaust system.

*Note:*

Original 2in1 exhaust systems do not fit without modification.

Mount the supplied starter relay in a suitable place.

Install a suitable starter button or ignition switch with start function.

Wire and connect all components as shown in the diagram. To avoid starting while a gear is engaged ground connection of the relay or rather the starter button must be via the neutral switch.

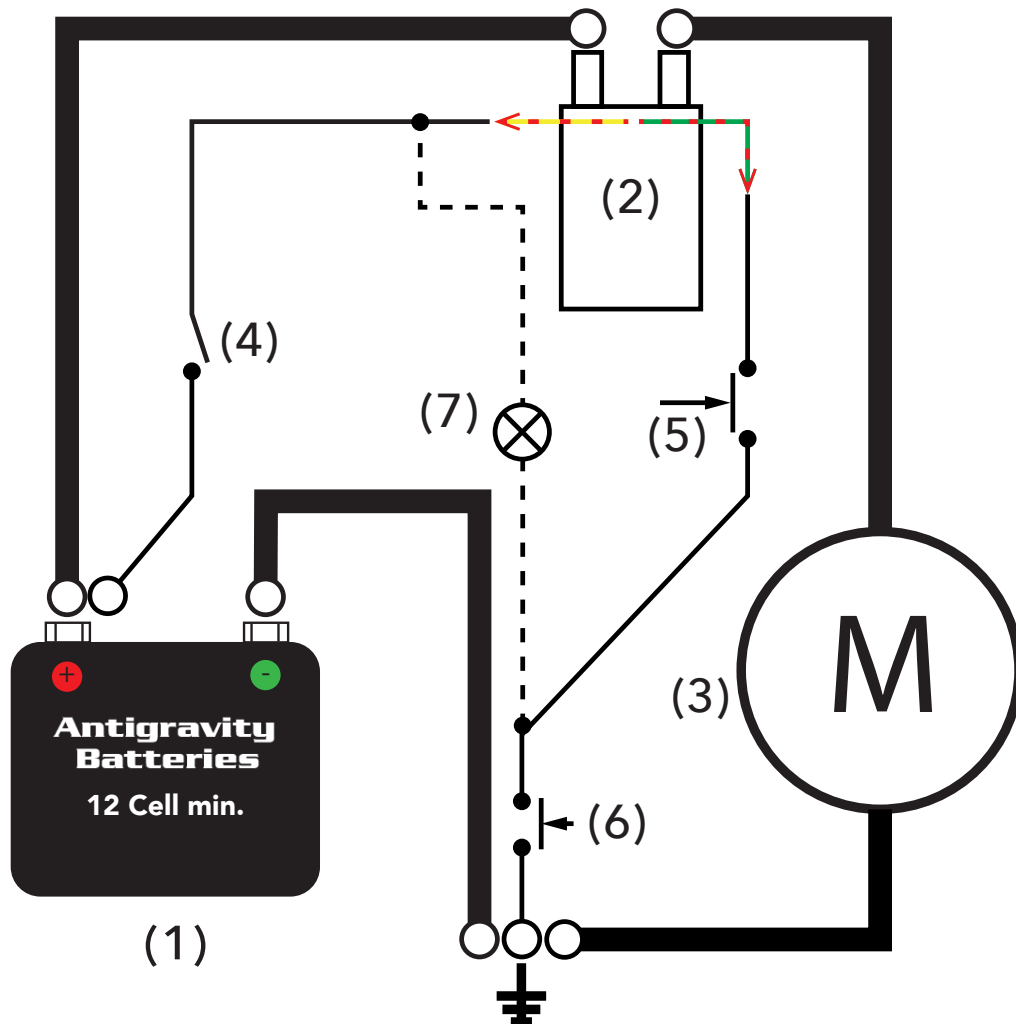
Install a suitable battery.

Start motorcycle as a test.

Check clutch function.

If everything works properly and as planned: enjoy!

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- (1) Starter battery
- (2) Starter relay (high current)
- (3) Starter motor
- (4) Ignition switch
- (5) Starter button switch (4 A min.)\*
- (6) Neutral gear switch
- (7) Neutral light (optional)

*\*) We recommend good OEM reproductions like WW 14-070 and 14-073. If you're using weaker button switches we strongly recommend to wire a second relay.*