



# HARLEY DAVIDSON & V-TWIN

[WWW.ALLBALLSRACING.COM](http://WWW.ALLBALLSRACING.COM)

All Balls starter motors are manufactured with all new components that have been fine tuned for starting the HD® V-Twin engine and are backed by the Industry's best customer service and warranty.

All Balls has partnered with Bosch to manufacture our all new starter motors.

✓ **More Reliable**

✓ **More Efficient**

✓ **Higher Output**

**1.4kW Starter Motors:** A great stock replacement starter backed by the Industries best limited lifetime warranty. The 1.4kW design works well in larger C.I. engines with compression releases.

V-Twin '89-'06



V-Twin '07-Current



Sportster '81-Current



**1.7kW Hi-Performance Starter Motors:** A hi-performance starter motor in a compact design. This starter will fit FL series bikes without modification.

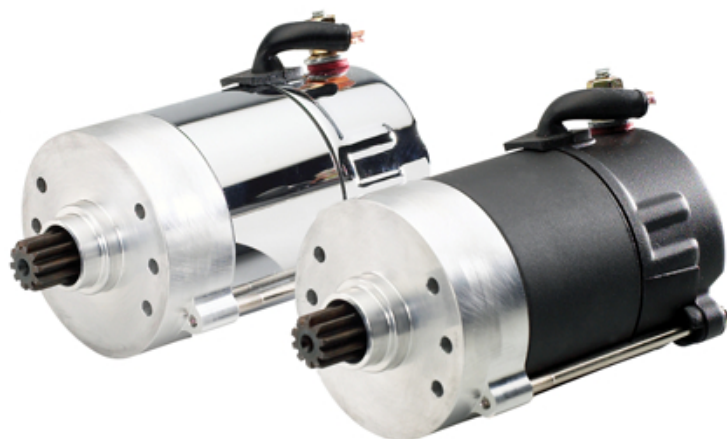
V-Twin '89-'06

(We recommend using 4GA battery cables and a minimum of 300CCA battery with this starter motor.)

**1.4kW Shovel Head Starters:** A hi-performance replacement for the stock 0.8kW Hitachi or Prestolite starters. This starter produces 50% more torque and shaft speed than the original starter in a compact design.

V-Twin '66-'88

(We recommend using 4GA battery cables and a minimum of 300CCA battery with this starter motor.)







# HARLEY DAVIDSON & V-TWIN

## New Replacement Generator

Exceeds original equipment output. Features double sealed bearing for long life. Hi-temp epoxy coated armature for added durability.



## Replacement Starter Clutch Assemblies:

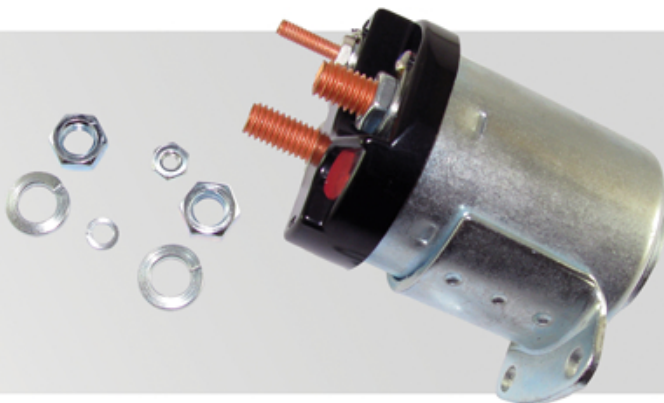
All new replacement clutch assemblies designed to improve clutch life under hard starting conditions.

**Solenoid Repair Kits:** Kits contain the movable and stationary contacts, gaskets, insulators and hardware to replace all of the wear items.



## Solenoid Assembly (4 speed transmissions):

A heavy duty design suitable for use with our hi-performance 1.4kW Shovel Head starter motors.



## 1 Piece Jackshaft Assembly:

Improves performance at a lower cost. This design delivers more torque to the primary while reducing the occurrences of shaft binding. The cushioning spring is moved to the back of the shaft eliminating the need for the inner primary support bearing making the jackshaft easier to install.





### **Hi Performance 4 Gauge Battery Cables:**

Increase starter performance by reducing voltage losses from undersized cables. Cables are manufactured with pure electrolytic grade, 36 gauge copper wire strands. The 7 over 7 bundling of the copper strands maximizes current flow and the flexibility of the cable. The outer jacket material is rated for 125°C and is oil and gas resistant. Cables are available in individual lengths, application specific cable kits and a convenient 25 custom cable kit allowing shops to build custom length cables.

Available in clear and black cable.



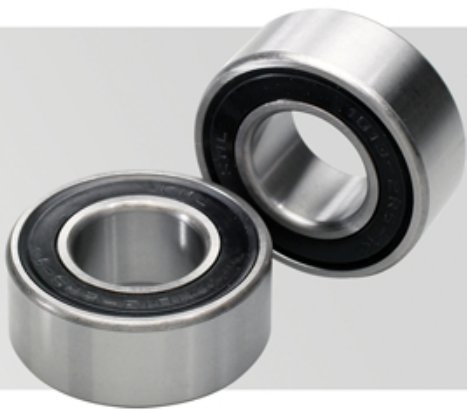
### **Inner Primary Bearing and Seal Kits:**

Stock Replacement Kit: Kit contains the bearing, inner bearing race, snap rings and seals to replace all wear items.

### **Hi-Performance Kit:**

Kit features a double row angular contact bearing with an oversize ID to provide a slip fit over the transmission main shaft. A must for all modified engines.

V-Twin '90-'06



### **Wheel Bearing Kits:**

All Balls bearings are precision ground, hi speed bearing manufactured to ABEC 3 standards. Each kit contains all the bearings and seals (if required) to refit a wheel.

### **Steering Bearing Kits:**

Kits contain the upper and lower taper bearing assemblies along with special design seals to prevent water and dirt contamination.





# ALL BALLS RACING, INC.

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## Swing Arm Bearing Kits:

Kits contains all of the bearings and seals (if required) to repair the swing arm.

## Fork & Dust Seal Kits:

The fork oil seal is engineered with 2 oil sealing lips and a 3rd seal lip which acts as an additional dust wiper to keep the fork tubes clean of dirt and grit. Dust seals features external garter springs to keep the fork tubes clean.



## Fork Bushing Kits:

Bushing kits contain (2) slider bushings (2) leg bushings along with all of the copper washers, o-rings and fork seal snap rings.

