761029

COMP MASTER™ CLUTCH

INSTALLATION INSTRUCTIONS

American Prime Manufacturing Inc.



1056-0005
1990-1997
Evo Big-Twin
chain drive primary

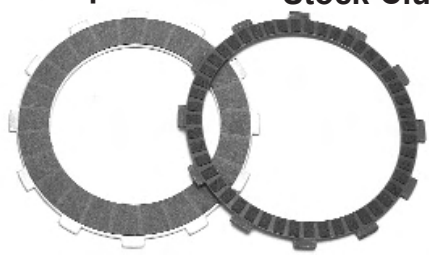
Comp Master™ Stock Clutch





1056-0006
1998-2006
Evo Big-Twin
& Twin-Cam
(except 2006 Dyna)
chain drive primary

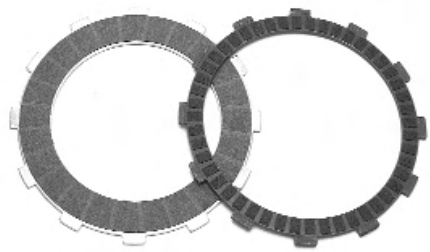
Comp Master™ Stock Clutch





1056-0020
2006 Dyna Models
&
All 2007-up
Big Twin Models

Comp Master™ Stock Clutch

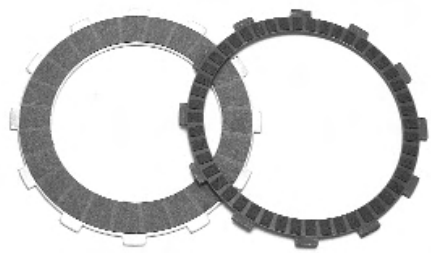




1056-0026
2011-16 Big Twin Models
w/Cable Clutch

1056-0027
2011-16 Big Twin Models
w/Hydraulic Clutch

Comp Master™ Stock Clutch



Congratulations you have just purchased **APM's *Comp Master™***, *the best clutch upgrade in the world. Please read and follow the directions for a simple, trouble free installation. If you have any questions about this installation please contact* **APM**, *and a knowledgeable* ***Clutch*** *technician will assist you. Thank you for purchasing a* ***Comp Master™ Clutch™***.

APM's *Comp Master™* Clutch for 1990 & later Evolution & Twin Cam Big Twin motorcycles increases clutch area almost 100%. More clutch surface means more performance potential. Installation is very simple. ***Comp Master™*-Clutch** installs quickly into the existing clutch basket by removing the OEM hub, and then installing the ***Comp Master™*** hub, followed by the ***Comp Master™*** clutch pack assembly.
The *Comp Master™* Clutch will easily transmit all your motor's torque & HP to the transmission without slipping or grabbing. Smooth, easy hand control makes **APM's *Comp Master™* Clutch** a must for any stock or high performance Harley Big Twin motorcycle.

SAFETY FIRST

When performing work on any motorcycle, and prior to starting this installation disconnect BOTH battery cables. If the motorcycle is on a lift, fasten the motorcycle securely to prevent it from falling. Please read and become familiar with the Comp Master™ instructions before starting. A hydraulic press is required to remove the OEM clutch hub and install the APM Comp Master™ hub. For safety use only the proper tools for a given task and wear eye protection.

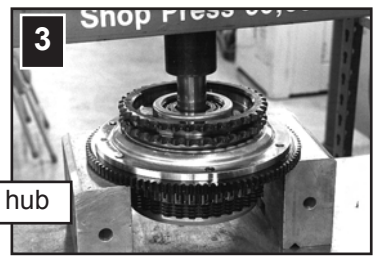
STEP 1:
As you disassemble your new clutch prior to installation, keep the clutch plates in exactly the same sequence as shipped. The clutch plates must be re-installed in exactly the same order. Drain the primary lubricant from the chain-case, and remove the outer primary cover. Loosen the primary chain adjuster and remove the OEM clutch basket and all of the OEM clutch components.



STEP 2:
Remove the retaining ring from the rear of the OEM clutch hub using the appropriate tool. ALWAYS wear eye protection during this procedure.

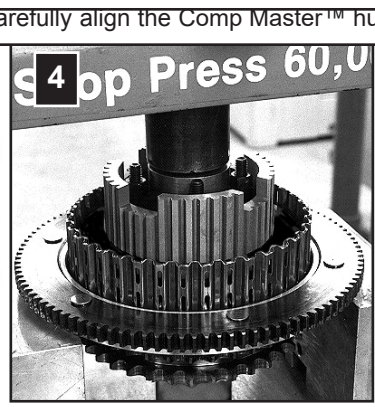


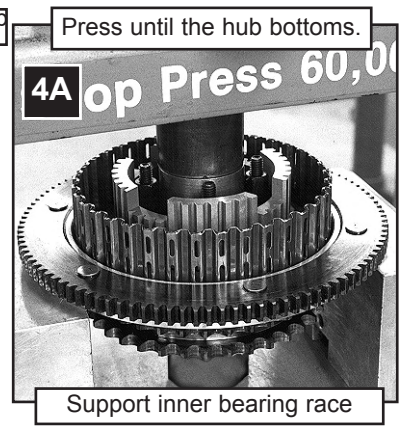
STEP 3:
Using a hydraulic press, remove the OEM clutch hub from the clutch basket. Firmly support the OEM clutch bearing as shown during this operation. After pressing the hub out, check the bearing for smoothness by rotating the clutch basket while holding the inner bearing race. If the bearing feels rough or if it binds, it must be replaced.



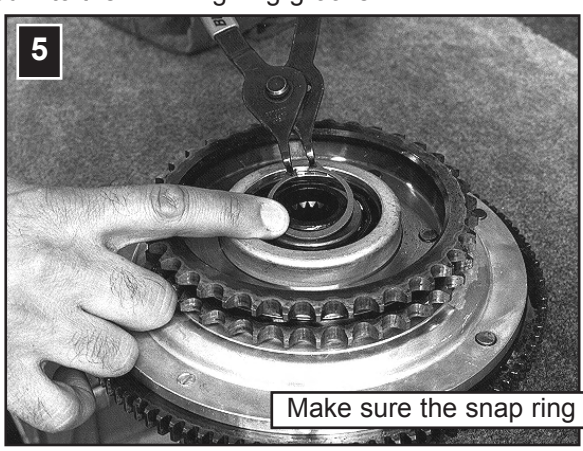
STEP 4:
Using the press, install the Comp Master™ Clutch hub into the OEM clutch basket. Securely support the INNER bearing races during this process. Carefully bottom the Comp Master™ hub in the OEM basket. After pressing in the Comp Master™ hub, check the bearing once again for smoothness!

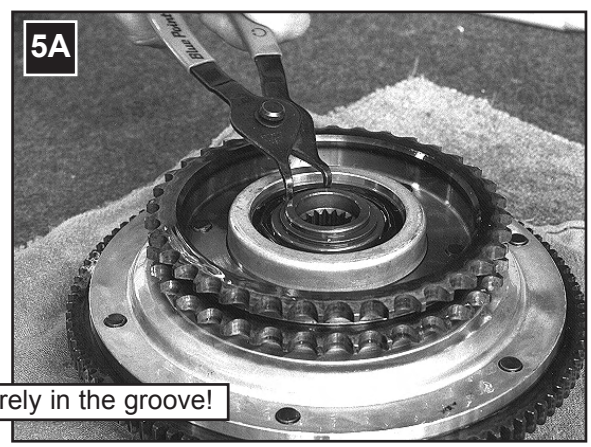




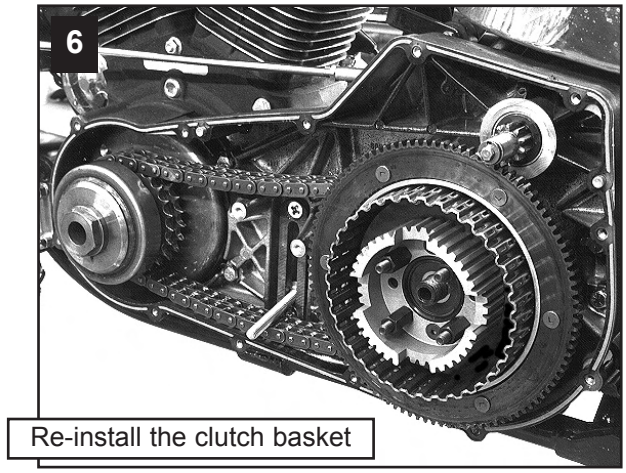


STEP 5:
Install the retaining ring onto the rear of the Comp Master™ hub as shown. Make sure the retaining ring is correctly installed into the retaining ring groove.



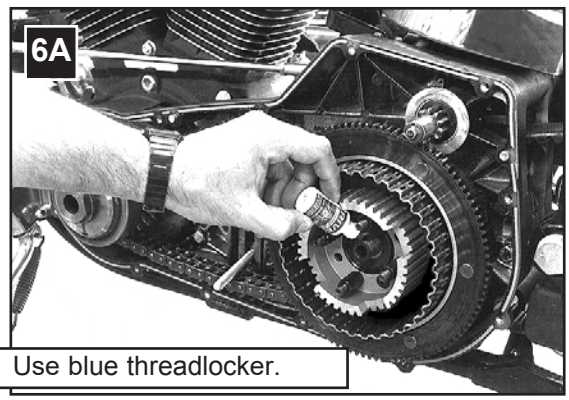


STEP 6:
Thoroughly wipe down the primary case & components to remove the OEM lubricant. Re-install the clutch basket into the primary case with chain & associated components. 'F' Type ATF is recommended as the primary lubricant for use with Comp Master™ Clutch units.



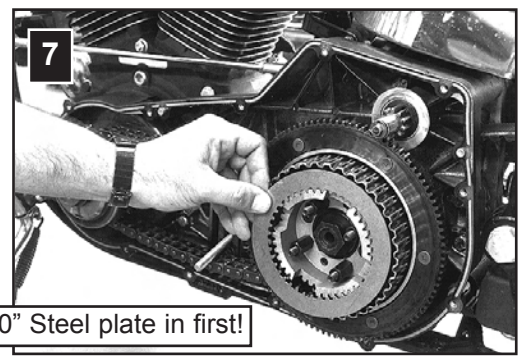
Re-install the clutch basket

STEP 6A:
Put two drops of blue thread lock on the transmission main shaft prior to installing the clutch hub nut. Tighten the clutch hub nut using the factory torque specifications (70-80 foot pounds for 90 & later models) indicated in your original equipment service manual.



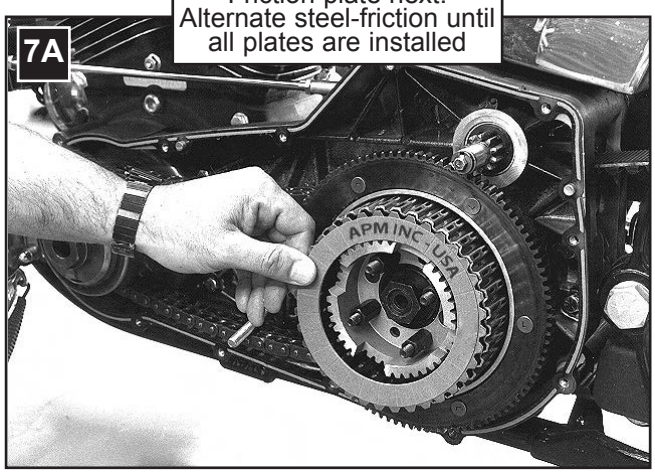
Use blue threadlocker.

STEP 7: Soak friction discs in 'F' Type ATF (wipe away excess before installation) lubricant for a minute prior to installation. Install steel & friction clutch plates exactly as they were shipped. Install the .120" steel plate first, then friction, alternating until all are installed. Never install 2 friction or 2 steel plates together.

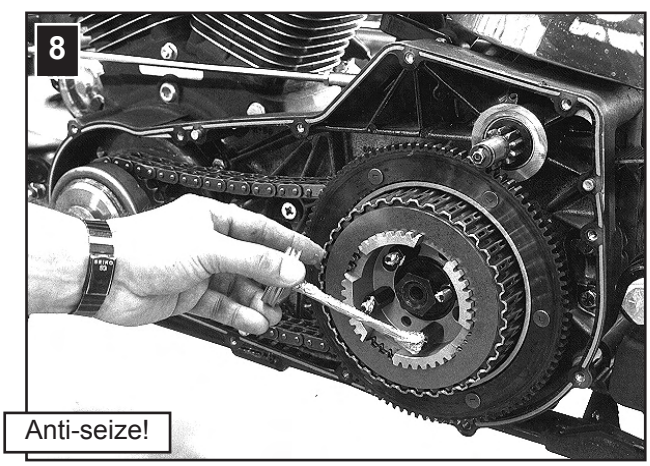


.120" Steel plate in first!

Friction plate next!
Alternate steel-friction until all plates are installed

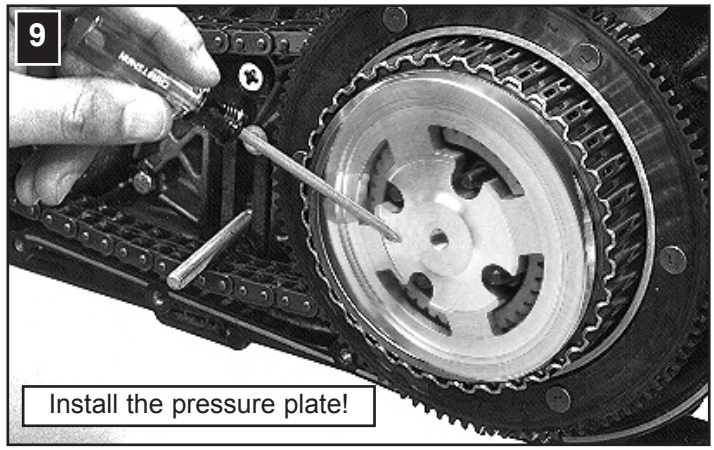


STEP 8: Generously dab some quality anti-seize on the stud threads of the Comp Master™ hub!

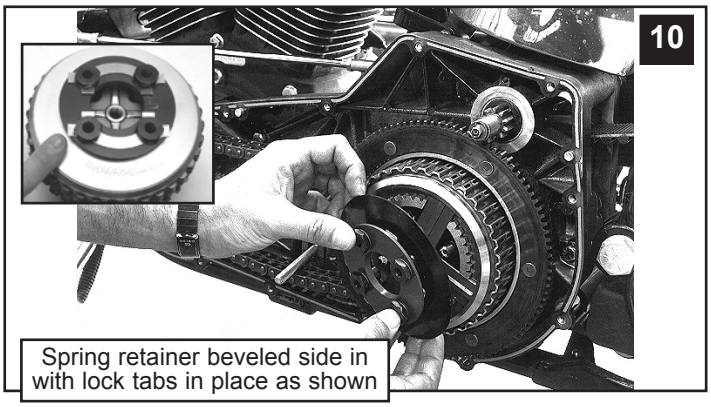


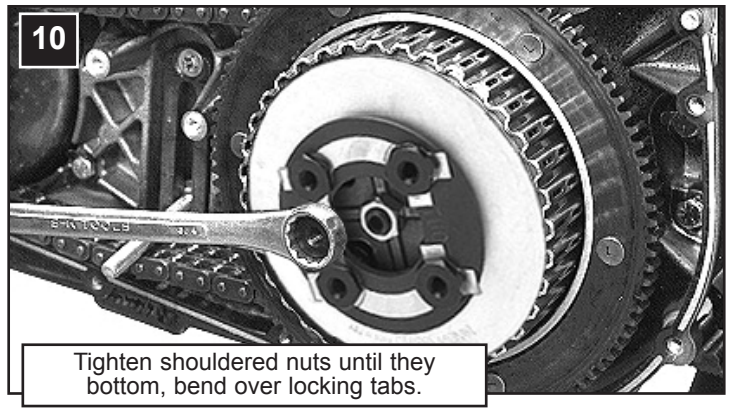
Anti-seize!

STEP 9: Install the pressure plate as shown!
Use your OEM adjuster screw!

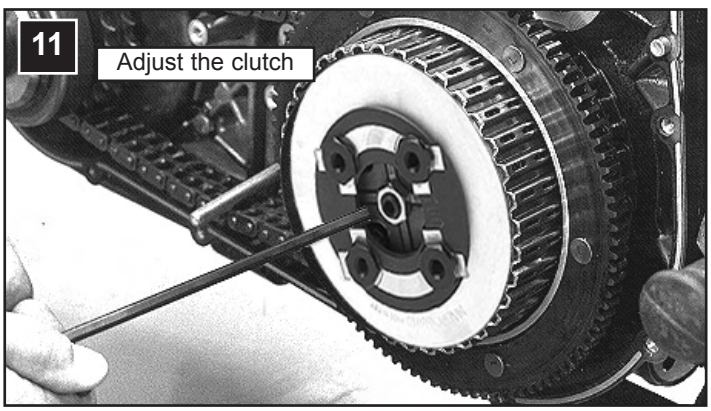


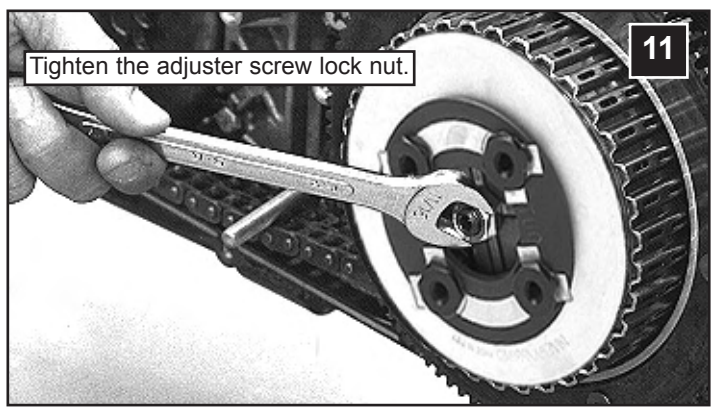
STEP 10: The diaphragm spring & spring retainer are installed next. (spring retainer goes beveled side in). Tighten the shouldered nuts equally (cross pattern) until they bottom.



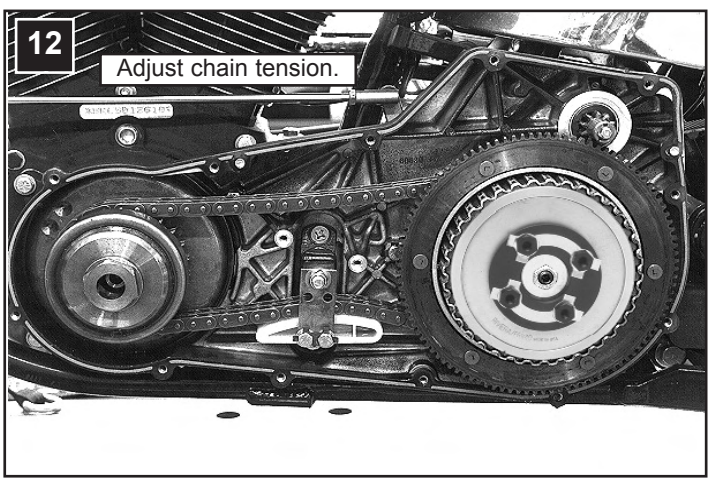


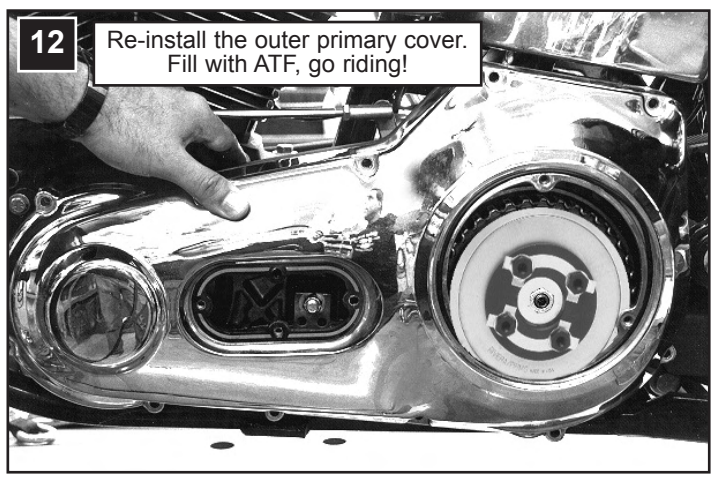
STEP 11: Adjust the clutch as you would normally using the center bolt adjuster.





STEP 12: Check and adjust primary chain tension as needed. Re-install the outer primary cover using a new gasket, and fill the chain case with 'F' Type ATF to the bottom of the ring gear.





COMP MASTER™ CLUTCH ADJUSTMENT

As delivered, the Comp Master™ clutch-pack requires no adjustment, having been set at the factory.

After the Comp Master™ Clutch has accumulated significant mileage, it may require some adjustment due to normal wear. Use the procedures outlined below if & when adjustment is required. For best performance the diaphragm spring MUST be compressed to within .010"-.020" of being flat when the shouldered spring retainer nuts have been properly tightened (bottomed)! This will provide maximum spring pressure to the clutch pack, with minimum hand effort at the handlebar!

Three clutch springs are available: A stock replacement spring (black in color), a medium spring for street performance (silver in color), and a competition spring (gold in color) for high horsepower applications.

If the diaphragm spring adjustment requires LESS ARCH, this can be accomplished by using one or more of the special .020" washers on each of the shouldered nuts. (photo A)

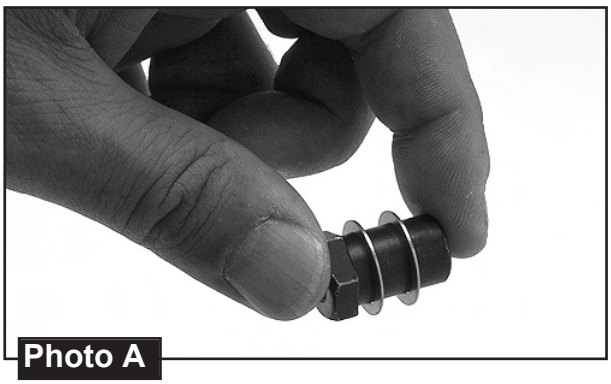


Photo A

If the diaphragm spring adjustment requires MORE ARCH, this can be accomplished by using one or more of the special .030" washers on the clutch hub studs nuts as pictured.



Photo B

The diaphragm spring will be compressed to within .010"-to-.020" of being flat when correctly installed & adjusted

Photo C shows a diaphragm spring that is compressed too far, and needs to be adjusted. Special adjustment washers be added to the clutch hub studs as shown in photo B.



Photo C

This is a diaphragm spring that is correctly adjusted. A little daylight is showing at either edge, because the spring is within .010"-to-.020" of being flat! (Slightly bowed outward) as seen in photo D.

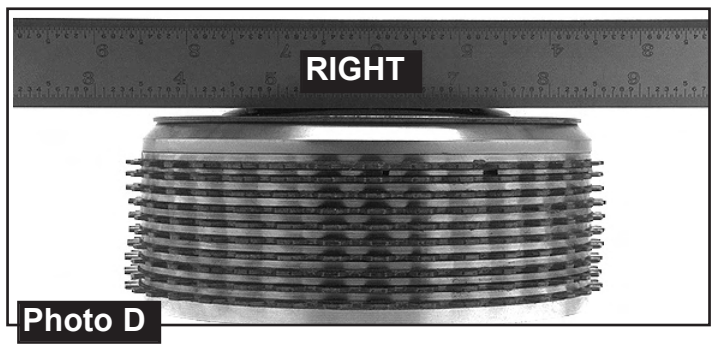
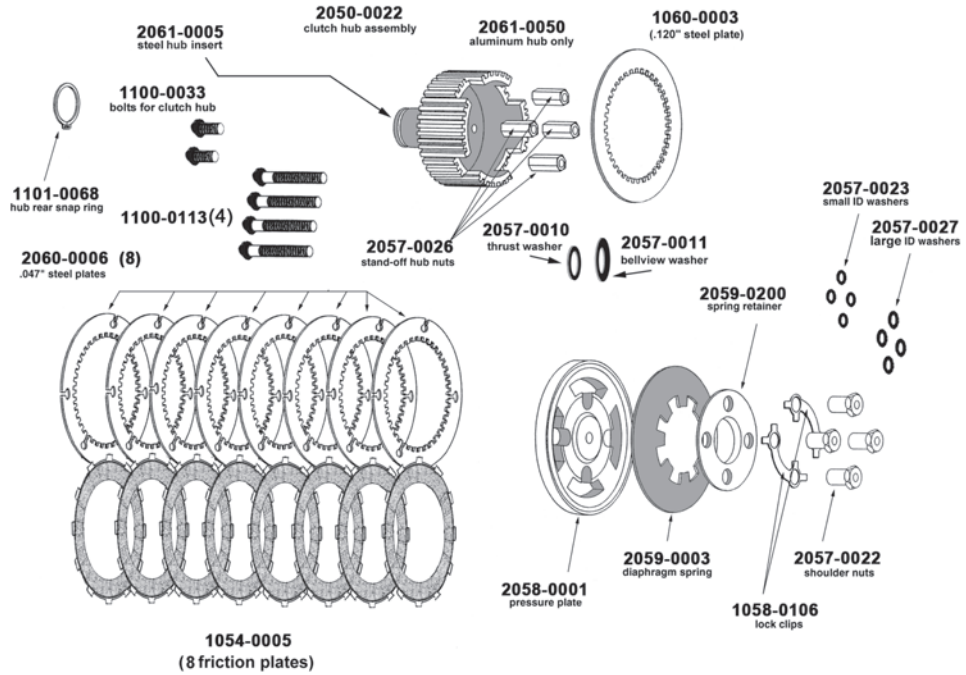


Photo D

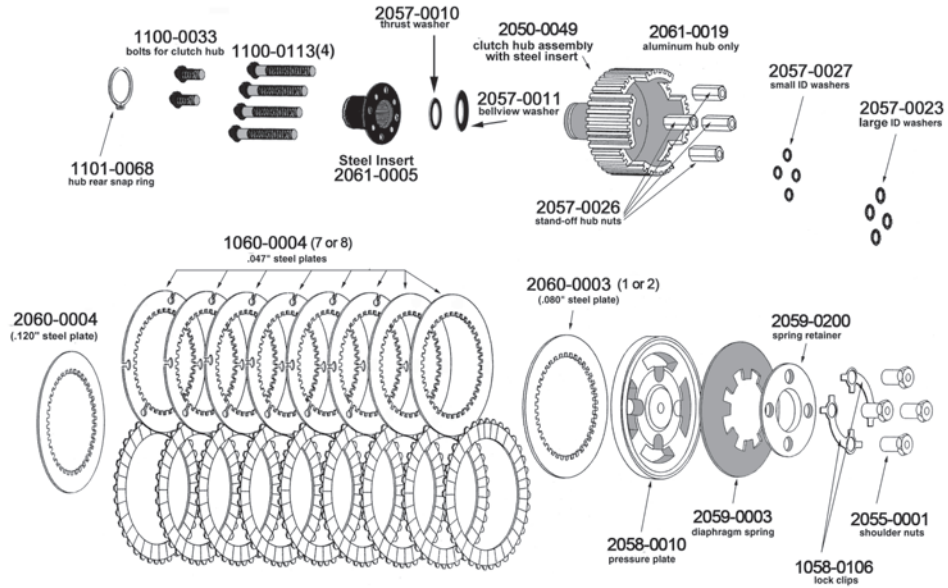
GENERAL WARRANTY

American Prime Mfg. Inc. (APM) sole obligation and the customer's sole remedy is limited to replacement or repair of products free of charge in the event products fail to perform as warranted for a period of one year from actual date of purchase. Proof of purchase must accompany any warranty claim. In no event shall APM Inc. be liable for claims for any other dam-ages, whether direct, incidental, foreseeable, consequential, or special (including but not limited to loss of use, revenue or profit), whether based upon warranty, contract, tort (including negligence) or strict liability arising in connection with the sale or the failure of APM Inc. products to perform in accordance with the stated specifications. APM Inc. makes no other warranty of any kind whatsoever, and specifically disclaims and excludes all other war-ranties of any kind or nature whatsoever, directly or indirectly, express or implied, including, without limitation, as to the suitabilitly, productivity, durability, fitness for a particular purpose or use, merchantability, condition, or any other matter with respect to APM Inc. products.

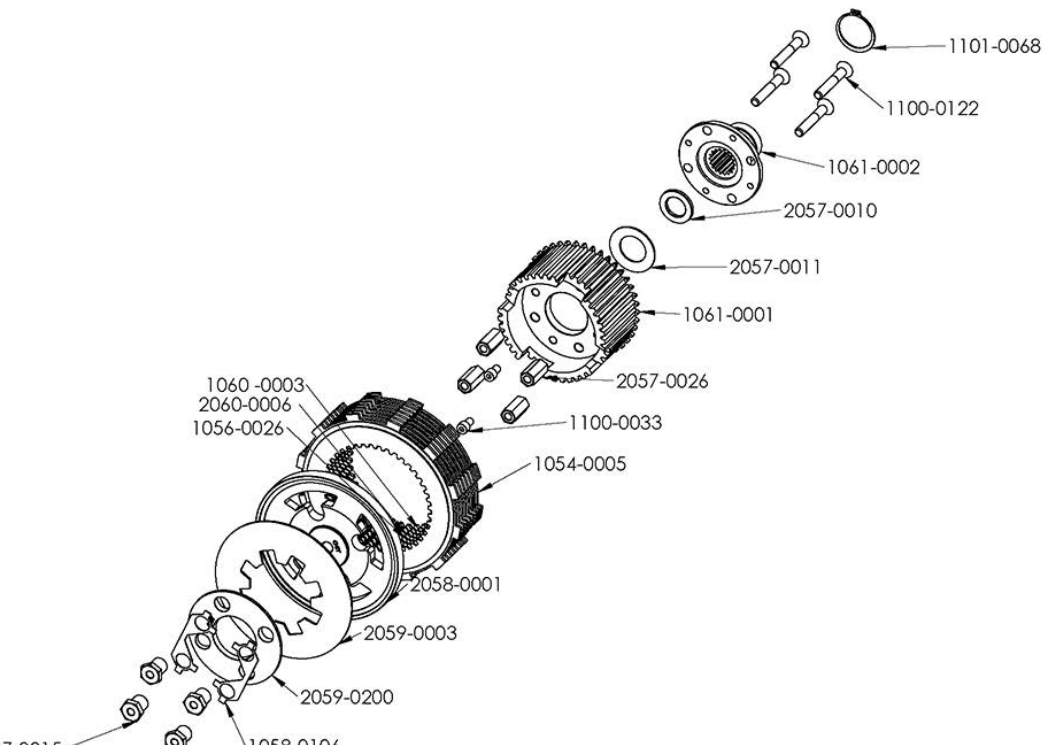
1056-0006



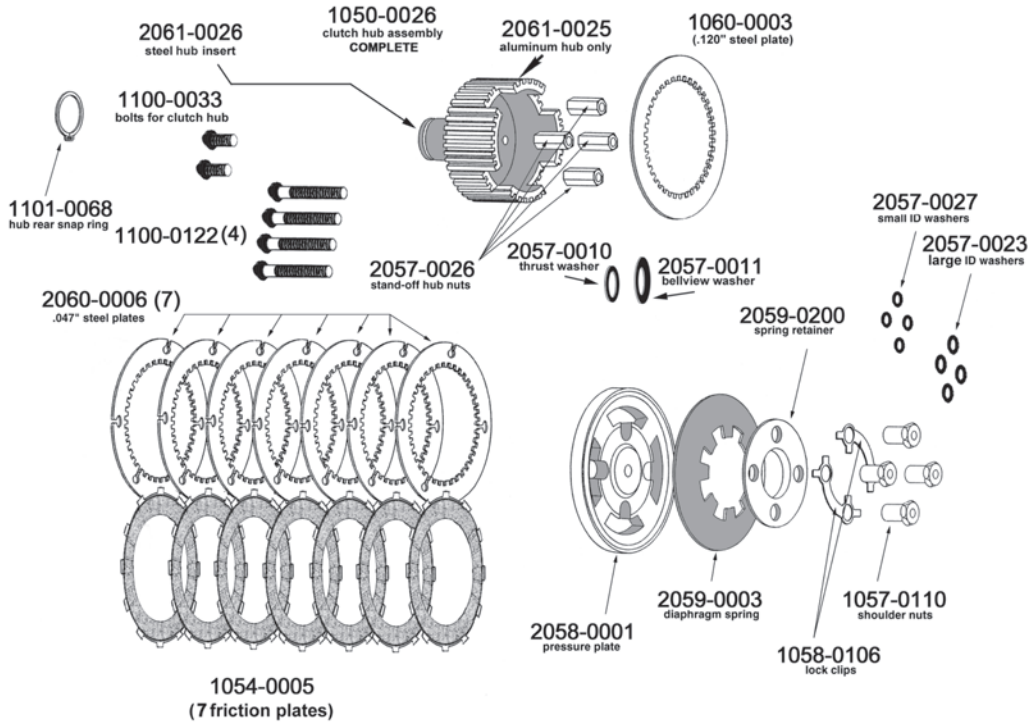
1056-0005



1056-0026



1056-0020



1056-0005
Fits 1990-1997 Evo Big Twin

Qty	Part #	Description
1	2061-0005	....Steel inner hub
1	2061-0019	....Outer hub (aluminum)
1	2057-0010	....Thrust washer
1	2057-0011	.....Bellview washer
2	1100-0033	.....Screws for clutch hub
4	1100-0113	.....Bolts for clutch hub
4	2057-0026	....Nuts for clutch hub screws
9	1054-0004	....Clutch friction plate(s)/Kevlar
2	2060-0003	....Clutch plate steel (.080”)
7	1060-0004	....Clutch plate steel (.047”)
1	2060-0004	....Clutch plate steel (.120)
1	1101-0068	.....Snap ring small
1	2058-0010	....Pressure plate
1	2059-0003	....Diaphragm clutch spring (silver/medium)
4	2055-0001	....Shouldered nuts (for retainer)
2	1058-0106	....Lock clips for shouldered nuts
1	2059-0200	....Diaphragm spring retainer
1	2057-0024	....Washer set (4 plus 4)
1	1108-0006	.....Installation instructions

1056-0006
Fits 1998-2006 Evo & Twin Cam (except 2006 Dyna)

Qty	Part #	Description
1	2061-0005	....Steel inner hub
1	2061-0050	....Outer hub (aluminum)
1	2057-0010	....Thrust washer
1	2057-0011	.....Bellview washer
2	1100-0033	.....Screws for clutch hub
4	1100-0113	.....Bolts for clutch hub
4	2057-0026	....Nuts for clutch hub screws
8	1054-0005	....Clutch friction plate(s)/Kevlar
8	2060-0006	....Clutch plate steel (.047”)
1	1060-0003	....Clutch plate steel (.120)
1	1101-0068	.....Snap ring small
1	2058-0001	....Pressure plate
1	2059-0003	....Diaphragm clutch spring (silver/medium)
4	2057-0022	....Shouldered nuts (for retainer)
2	1058-0106	....Lock clips for shouldered nuts
1	2059-0200	....Diaphragm spring retainer
1	2057-0024	....Washer set (4 plus 4)
1	1108-0006	.....Installation instructions

1056-0020
Fits 2006 Dyna & 2007-Up All Big Twin

Qty	Part #	Description
1	1050-0026	.....Complete clutch hub assembly
1	2061-0026	.....Steel inner hub only
1	2061-0025	.....Outer hub (aluminum) only
1	2057-0010	.....Thrust washer
1	2057-0011	.....Bellview washer
2	1100-0033	.....Screws for clutch hub
4	1100-0122	.....Bolts for mounting alum. plate
4	2057-0026	.....Stand-off hub nuts
7	1054-0005	.....Clutch friction plate/Kevlar
7	2060-0006	.....Clutch plate steel (.047”)
1	1060-0003	.....Clutch plate steel (.120”)
1	1101-0068	.....Small snap ring
1	2058-0001	.....Pressure plate
1	2059-0003	.....Diagraphm clutch spring (silver/medium)
1	2059-0200	.....Diaphragm spring retainer
4	1057-0110	.....Shouldered nuts (for retainer)
2	1058-0106	.....Lock clips for retainer nuts
1	2057-0024	.....Shims for clutch pack (4 large / 4 small)
1	1108-0006	.....Installation instructions

1056-0026/0027
Fits 2011 - 2016 Big Twin

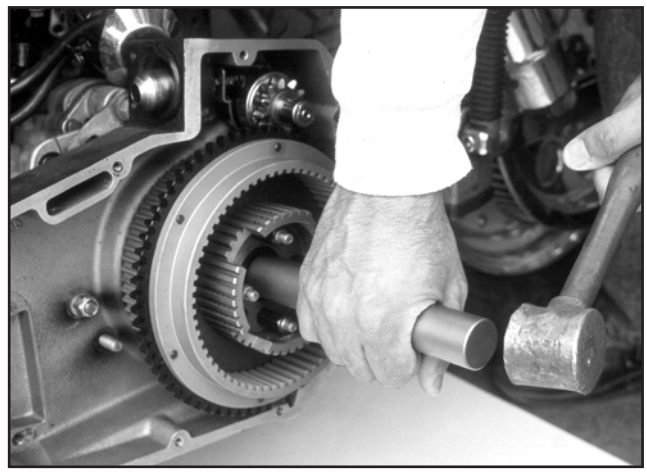
Qty	Part #	Description
1	1061-0002	.....Steel inner hub only
1	1061-0001	.....Outer hub (aluminum) only
1	2057-0010	.....Thrust washer
1	2057-0011	.....Bellview washer
2	1100-0033	.....Screws for clutch hub
4	1100-0122	.....Bolts for mounting alum. plate
4	2057-0026	.....Stand-off hub nuts
8	1054-0005	.....Clutch friction plate/Kevlar
5	2060-0007	.....Steel Clutch Plate 080"
3	2060-0006	.....Clutch plate steel (.047”)
1	1060-0003	.....Clutch plate steel (.120”)
1	1101-0068	.....Small snap ring
1	2058-0001	.....Pressure plate (2058-0030 for 1056-0027)
1	2059-0003	.....Diagraphm clutch spring (silver/medium)
1	2059-0200	.....Diaphragm spring retainer
4	1057-0015	.....Shouldered nuts (for retainer)
2	1058-0106	.....Lock clips for retainer nuts
1	2057-0024	.....Shims for clutch pack (4 large / 4 small)
1	1108-0006	.....Installation instructions

TAPERED SHAFT HUB REMOVER TOOL

1062-0002. Tapered hub removal tool (all applications). Simply mount the tool on the left hand threads of the transmission main shaft, and give the end of the tool a sharp tap with a medium weight hammer and the clutch hub simply "pops" off. Available now for all tapered shaft clutch hubs.



AVAILABLE SOON!



American Prime Mfg.

CLUTCH HUB PULLER





1062-0003 . . . Quickly attaches to most Comp Master or Rivera diaphragm Clutches to allow quick easy removal of the hub.

AVAILABLE SOON!

American Prime Mfg.

CLUTCH HUB HOLDER

1062-0001 . . Engages & holds clutch hub splines to allow correct torque specification to be applied to the clutch hub nut (left-hand thread) when installing a Comp Master Clutch™ or Rivera Clutch. Also holds clutch hub for de-installation.



American Prime Mfg.

AVAILABLE SOON!

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