



MAD DOG MOUNTING SYSTEM MANUAL

P/N CCE MDFXR1 FXR 1982-1994,2000 .629" PIVOT SHAFT

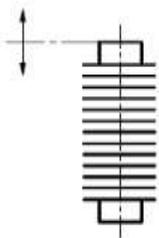
P/N CCE MDFXR2 FXR 2002-2012 WITH AFTERMARKET CONVERSION .750" PIVOT SHAFT

P/N CCE MDFL1 FLH/FLT 1980-2001 .629" PIVOT SHAFT

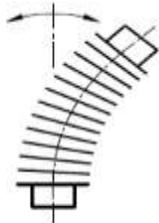
P/N CCE MDFL2 FLH/FLT 2002-2012 .750" PIVOT SHAFT

PAT PEND

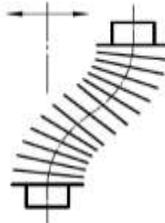
Foreword: The Mad Dog mounting system is engineered to stabilize swing arm movement thus improving control at all speeds. A pair of cylindrical style metal bushings with an inner metal layer encased in vulcanized rubber provide a superior long lasting vibration isolator. When combined with CCE spherical bearing kit(sold separately) you have the ultimate in tracking stability. The drawings below depict movements stabilized at the swing arm.



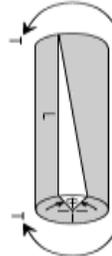
Axial movement



Angular movement



Lateral movement



Torsional movement

Application:

The Mad Dog can be fitted to most **FXR, FLT, or FLH** models from 1980 to 2012

1980 to 1990 models require 7/16-20 fine threaded bracket mounting screws.

1991 to 2012 models require 7-16-14 coarse threaded screws.

Both thread types come in this kit. Choose carefully to prevent damage.

Models available for standard shaft .629"Ø or upgrades with .750" Ø shaft.

Installation:

Refer to the Harley Davidson service manual for the model and year before installing the kit.

1. **Always disconnect battery for safety.**
2. Support motorcycle on a center stand and a **scissor jack** at rear of transmission.

3. For clearance to remove factory swing arm support bracket on the right side of some models it will be necessary to remove exhaust or rear head pipe. Models with dual exhaust may require removing left side as well. 



4. Support the trans to relieve pressure on rear fork (swing arm) and remove any footboards and brackets, rubber mounts, and hardware.
5. Apply anti seize to Mad Dog shaft.
6. Thread pilot tool onto the Mad Dog shaft only hand tight . Pilot tool is tapered to help with alignment during installation of the shaft. Remove pilot tool after shaft is installed.

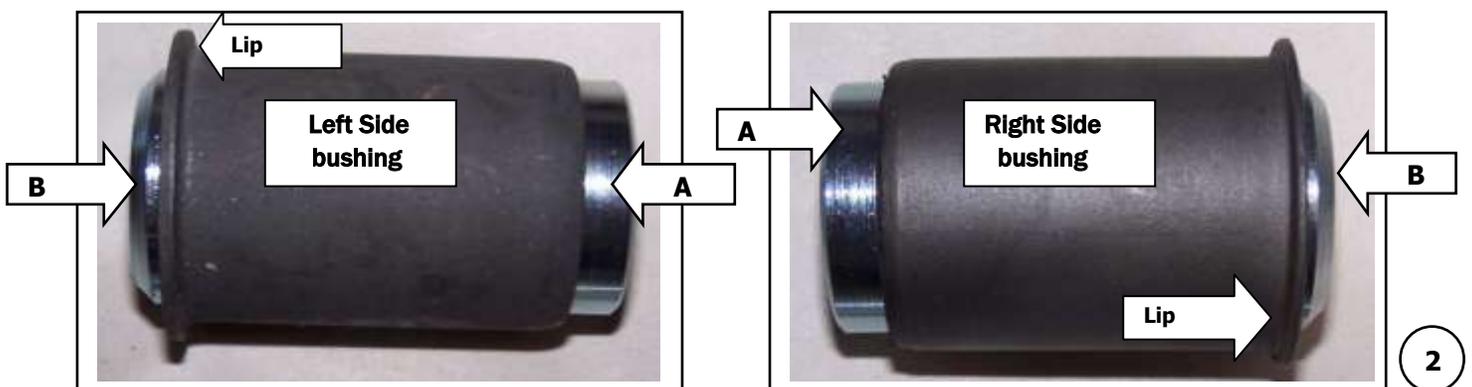


7. Remove the Harley shaft a little at a time while simultaneously from the opposite side start inserting the Mad Dog shaft from the pilot tool side.

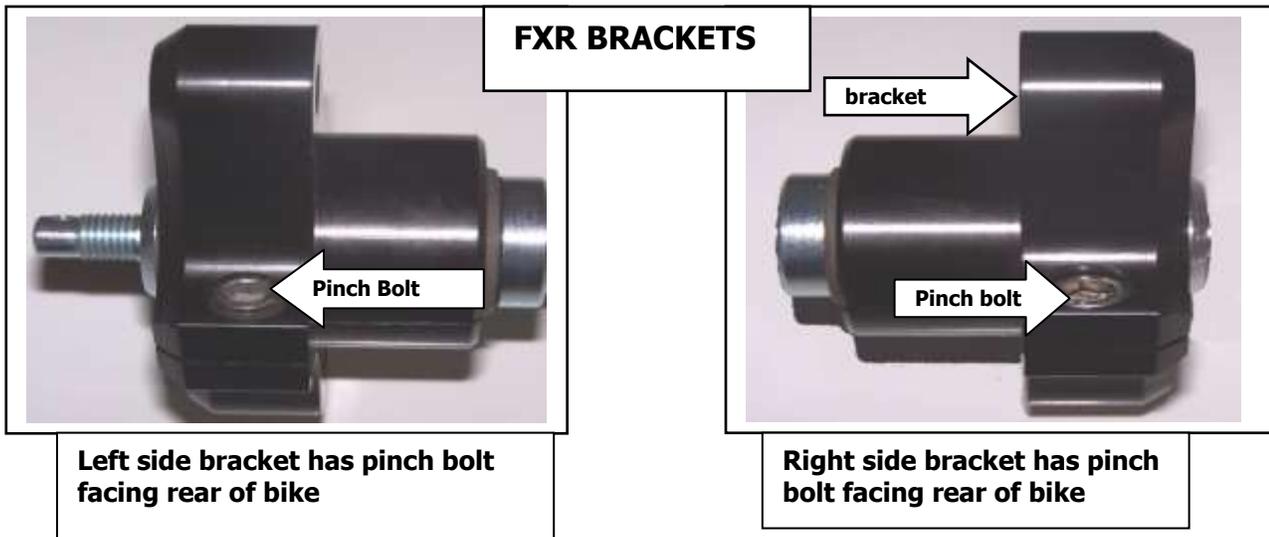
Note: Harley made 3 shaft styles; 1. a welded nut on one side, 2. a removable nut on both sides, or 3. a 3 piece shaft. The factory shaft or any aftermarket shaft is no longer needed after removal.

Note: The Mad Dog is designed to work with factory Harley or most aftermarket swing arm bushings or bearings therefore their removal is not necessary.

8. **Note :** location of the flanged spacers per picture, wide flanged spacer(**A**) goes into bushing facing per picture below and narrow flanged spacer(**B**) goes against outer lip of bushing. View from rear.



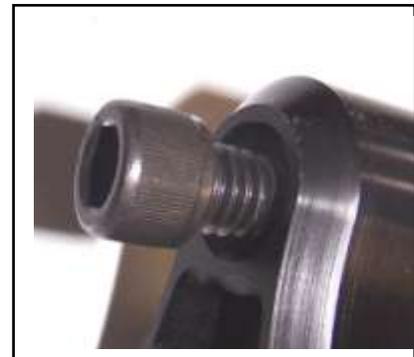
9. Brackets with bushings installed as shown below. Do not tighten pinch bolts until step 13



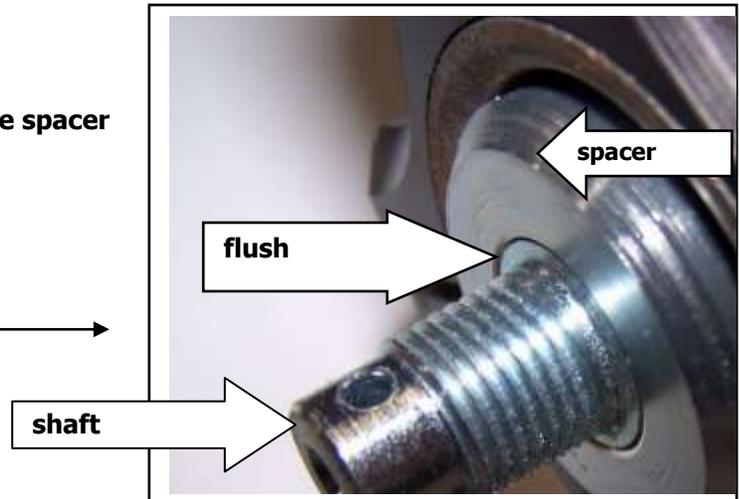
10. Apply red thread lock to the four 7/16 x 1 1/4" socket head cap screws. Slide Bracket over shaft with pinch bolt facing rear. Some maneuvering between the trans and drive train may be necessary to align mounting points on the frame. Insert bolts into frame and tighten be sure to use proper threaded bolts.

1980 to 1990 models require 7/16-20 fine threaded bracket mounting screws(4).
1991 to 2012 models require 7-16-14 coarse threaded screws(4).
Both thread types come in this kit. Choose carefully to prevent damage.

Torque 7/16 -14 bolts with thread lock to 50 ft lbs.
Torque 7/16-20 bolts with thread lock to 55 ft lbs.



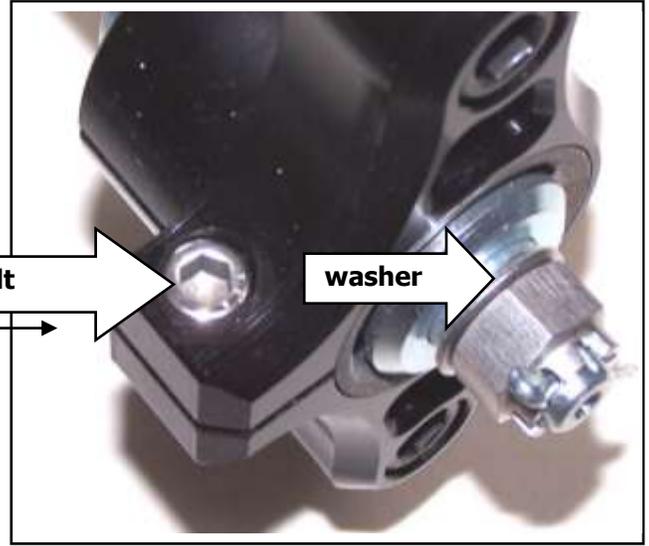
11. Shaft must be flush or no more than .030" inside spacer for proper preload. See arrows
Note: Manufacturing tolerances in frame may require modification to outer spacer.



12. Install flat washer against bushing, next install 1/2-20 Castle Nut and torque to 35-40 ft lbs while aligning cotter key to hole in shaft



13. Apply red thread lock to pinch bolt and tighten to 18 ft lbs



14. Install foot rests to FLH or FLT
15. Attach exhaust where needed.



**FLT FLH
BRACKETS**



FXR BRACKETS

NOTE: FOR BEST PERFORMANCE FULL POWERTRAIN ALIGNMENT ADVISED PER Harley Manual