



**STIFFLERS**  
CHASSIS & SUSPENSION

1511 Hancel Parkway Mooresville, IN 46158 317-837-2444

**Front Lower Control Arms**  
**1997-2004 F-150 (2WD)/1999-'04 Lightning & Harley Davidson**  
**(FLCA-FT01)**

**Basic Kit Includes:**

- (1) Driver Side Control Arm Assembly
- (1) Passenger Side Control Arm Assembly
- (2) Spring Seats
- (2) Spring Isolators
- (2) Castle Nuts with Cotter pins
- (6) Grease Fittings

- (4) 5/16-18 x 3/4" HCS
- (8) 5/16-18 Flange Nut
- (2) 3/8-24 x 5/8" SHCS
- (2) 3/8-24 Jam Nut
- (2) Tie Wraps
- (1) End-Link Kit

**Required Tools:** Jack Stands  
Floor Jack  
Basic Hand Tools  
Torque Wrench  
Grease Gun  
Thread Locker (242 Loctite or equivalent)

**Install Time:** Approximately 2~3hrs.

**READ THESE INSTRUCTIONS BEFORE STARTING.**

**(If you are not comfortable doing the work, please have installed by a professional.)**

**Installation:**

- 1) Raise front of truck to allow access for installation; support with jackstands on frame.
- 2) Remove front wheels.
- 3) Remove front shocks, retain upper mounting hardware.
- 4) Disconnect brake hose bracket from control arm.
- 5) Remove OEM sway bar endlinks, they will not be reused.
- 6) Beginning with either side, loosen control arm mounting bolts but **DO NOT REMOVE**.
- 7) Remove cotter pin from lower ball joint, loosen castle nut and unscrew but **DO NOT REMOVE** (Fig.1)
- 8) Securely position floor jack under control arm and raise jack 2~3 inches. This will put a small tension load on the lower ball joint and also keep the spring securely in place when the ball joint is loosened. *[NOTE: Be sure to position jack out of the way as much as possible.]*
- 9) Separate ball joint by sharply striking the knuckle with a hammer. (Fig.1)
- 10) Remove castle nut.
- 11) Continue raising jack until the ball joint stud can be removed from the knuckle.
- 12) Once the ball joint has been removed, allow the upper control arm and spindle assembly to hang down being careful not to damage the brake hose.
- 13) Carefully lower jack to release spring load, remove spring once it is free.
- 14) Remove control arm.
- 15) Clean old grease and dirt from control arm frame mounts.





1511 Hancel Parkway Mooresville, IN 46158 317-837-2444

- 16) Loosely install lower spring seat as shown using the 5/16" hardware, **DO NOT TIGHTEN.** (Fig.2 & 3)
- 17) Install the three grease fittings into ball joint and bushings.
- 18) Lube ball joint until grease comes from weep hole. (Fig.4)
- 19) Lube the bushings until grease comes out of the ends. Spread grease around bushing face. (Fig.5)
- 20) Apply and small amount of new grease to control arm frame mounts.
- 21) Loosely install control arm.
- 22) Move arm up/down several times to work in grease.
- 23) Torque mounting bolts to 130 ft-lbs
- 24) Place floor jack under control arm but do not raise. NOTE: It may be helpful to use a piece of wood between the jack and the bottom of the arm to help spread the load.
- 25) Install rubber isolator on spring and position onto lower spring seat. **CLOCK THE SPRING SO THE END IS AS SHOWN.** (Fig.6)
- 26) Raise jack while guiding the top of the spring into the upper spring seat.
- 27) Once the spring is slightly compressed, re-confirm it is clocked properly and continue to raise arm until high enough to insert ball joint stud into knuckle. Tilting the bottom of the spindle assembly outward will help to insert the ball joint. (Fig.7)
- 28) Slowly lower control arm completely and remove jack.
- 29) Install castle nut and torque to 98 ft-lbs. If holes are not aligned continue tightening until cotter pin can be installed.
- 30) Reposition jack under knuckle and raise control arm 3~4" inches.
- 31) Finish tighten the two bolts securing the lower spring seat. (Fig.3)
- 32) Install shock using original upper hardware and supplied nuts to fasten bottom end.
- 33) Lower and remove jack
- 34) Repeat steps 6~32 for other side.
- 35) Place drop of thread locker on each end of stud and assemble swaybar endlinks together, securely tighten together. (Fig.8)
- 36) Attach straight side of endlinks to swaybar using supplied hardware. For OEM swaybar use large diameter reducer, use small one for Aftermarket swaybars. (Fig.9)
- 37) Attach endlinks to control arms. (Fig.10)
- 38) Using supplied tie wrap, secure brake hoses to control arms. (Fig.10)
- 39) Install tires and lower truck.
- 40) Adjust steering stops. Slowly turn the wheel full-lock to the left until it stops. Turn wheel back slightly to the right and adjust bolt until it touches the knuckle. Tighten jam nut. Check for any possible clearance issues. Repeat for other side. (Fig.11)



# STIFFLERS

CHASSIS & SUSPENSION

1511 Hancel Parkway

Mooreville, IN 46158

317-837-2444

Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5





# STIFFLERS

CHASSIS & SUSPENSION

1511 Hancel Parkway

Mooresville, IN 46158

317-837-2444

Fig. 6

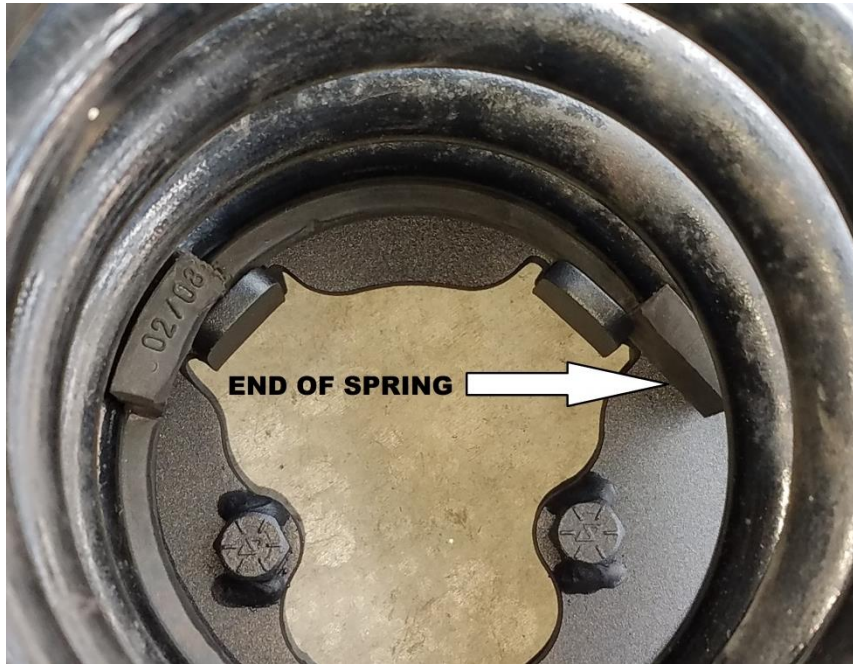


Fig. 7





# STIFFLERS

CHASSIS & SUSPENSION

1511 Hancel Parkway

MOORESVILLE, IN 46158

317-837-2444

Fig. 8



Fig. 9



Fig. 10

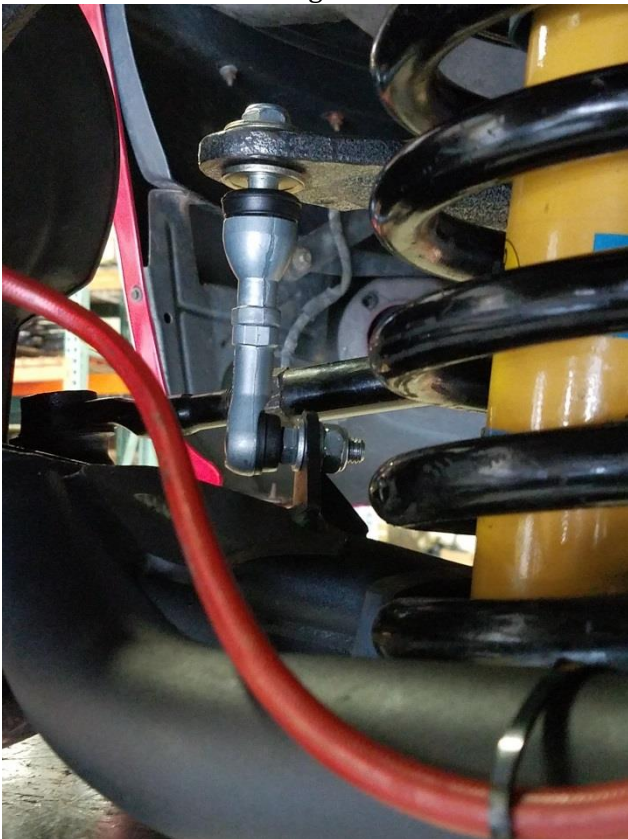


Fig. 11

