



## Adjustable Front Upper Control Arms 1997-2004 F-150 (2WD)/1999-'04 Lightning & Harley Davidson (AFUCA-FT01 & AFUCA-FT01-S)

### Kit Includes:

- |  |   |
|--|---|
| (1) Front Rod Assembly (Driver)                  | (6) 7/16-14 PINCH NUT                         |
| (1) Front Rod Assembly (Pass.)                   | (2) Castle Nut                                |
| (2) Rear Rod Assembly                            | (2) Cotter Pin                                |
| (4) Pivot Mount Assembly (polyurethane or nylon) | (6) Grease Fitting                            |
| (8) Mounting Spacer                              | (4) Wave Spring ( <b>Solid Bushing Only</b> ) |
| (6) 7/16-14x1.25 Hex Cap Screws                  | (8) 7/8 Washer                                |

- Required Tools:**
- Jack Stands
  - Floor Jack
  - Standard & Metric Socket Sets
  - Basic Hand Tools
  - Pickle Fork
  - Torque Wrench
  - Grease Gun

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

### Pre-Install Notes:

- The rod assembly lengths are preset **DO NOT loosen jam nuts until ready for alignment.**
- Do not lube grease fittings until after the arm is installed.

### Installation:

- 1) Loosen lug nuts on both front tires
- 2) Raise front of truck to allow access for installation; support with jackstands on frame.
- 3) Starting with either side, remove tire.
- 4) Support lower control arm by securely positioning floor jack under it and raising jack, being careful not to lift truck off jack stand. This will take the load off the upper 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.]*
- 5) Remove wheel-speed sensor clamp from upper control arm using a flat blade screwdriver.
- 6) Remove wheel-speed sensor retaining bolt and place sensor out of the way. (Fig.1)
- 7) Remove cotter pin from upper ball joint and loosen castle nut and unscrew but DO NOT remove.
- 8) Separate upper ball joint by sharply striking the knuckle with a hammer or by driving a pickle fork between the ball joint and knuckle.
- 9) Loosen control arm mounting bolts.
- 10) **IMPORTANT REMINDER:** *Once the ball joint has been removed the spindle assembly will be unsupported and freely move around.* Remove the castle nut; support the spindle assembly with one hand and use the other to push up on the control arm to disengage the ball joint. Allow spindle assembly to lay over being careful not to damage the brake hose.
- 11) Remove upper control arm.



- 12) Locate the correct (Driver/Pass.) front rod assembly and loosely connect rear rod assembly using supplied hardware. Insert bolt from the top side. (Fig.2)
- 13) Install grease fitting into pivot mount assemblies (Fig.6), **DO NOT GREASE.**
- 14) Loosely connect pivot mount assembly to each rod with the grease fitting facing up. (Fig.2)
- 15) Apply small amount of grease to pivot sleeve and bushing flange and install washers & mounting spacers.  
*[NOTE: For polyurethane bushing install one washer on each side of bushing as shown in Fig.5]*  
*[NOTE: For solid bushing install washers and wave spring as shown in Fig.6]*
- 16) Lift control arm into place and loosely install using existing cam-bolts. *[NOTE: It may be easier to install the front mounting bolt first, then position rear mount into place and install its' bolt.]*
- 17) **Rotate cam-bolts completely inboard** and torque to 100 ft-lbs. *[NOTE: The cam-bolts will not be used for alignment, any necessary setting adjustments will be done with the control arm.]* (Fig.3)
- 18) Lift control arm and insert ball joint into knuckle. Install castle nut and torque to 69 ft-lbs. If holes are not aligned continue tightening until cotter pin can be installed.
- 19) Torque the three 7/16" bolts to 60 ft-lbs.
- 20) Install grease fitting into ball joint; **lube ball joint and bushings.**
- 21) Fasten wheel-speed sensor clamp to control arm as shown. (Fig.4)
- 22) Re-install wheel-speed sensor and retaining bolt. (Fig.1)
- 23) Lower jack and repeat Steps 4~21 on other side.
- 24) Install tires, lower truck and make appointment for alignment!
- 25) **Check torque on control arm bolts after initial 50 miles, then periodically re-check.**

### ALIGNMENT SPECS:

The front and rear rod lengths are preset to ensure both caster and camber angles are sufficiently close to the factory settings **HOWEVER, an alignment is still required.** The table below has suggested settings for all street driven trucks.

SUGGESTED SETTINGS	FRONT LEFT	FRONT RIGHT
CAMBER	-0.5 deg. (Factory Spec -1.2~0.2)	-0.5 deg. (Factory Spec -1.2~0.2)
CASTER	+6.7 deg. (Factory Spec 5.7~7.7)	+7.2 deg. (Factory Spec 6.2~8.2)

### ADJUSTMENT GUIDELINES

- If large adjustments in camber/caster are needed (more than 2 degrees) slightly loosen the 7/16" bolts prior to making adjustments. This will keep the arm from binding and make rotating the rods much easier. Re-torque bolts when completed.
- Rotate rods **clockwise (CW) to lengthen; counter-clockwise (CCW) to shorten** (as viewed from side of truck)
- Adjustment Example

	CAMBER CHANGE	CASTER CHANGE
Shorten <b>Front</b> Rod (1 Turn)	-0.3~-0.4 deg.	-0.4~-0.5 deg.
Shorten <b>Rear</b> Rod (1 Turn)	-0.3~-0.4 deg.	0.4~0.5 deg.
Shorten <b>Both</b> Rods (1 Turn)	-0.6~-0.8 deg.	None



# STIFFLERS

CHASSIS & SUSPENSION

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Fig.1



Fig.2



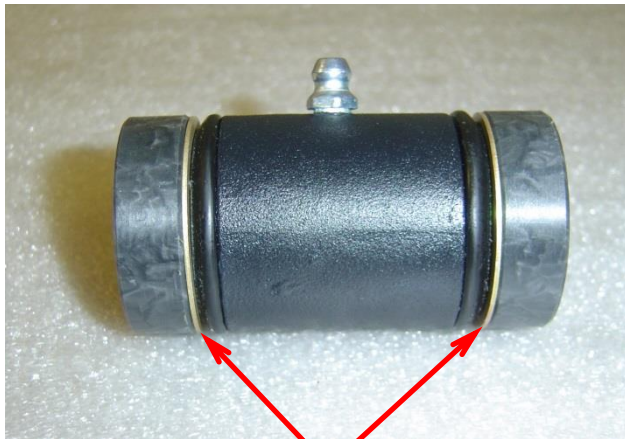
Fig.3



Fig.4

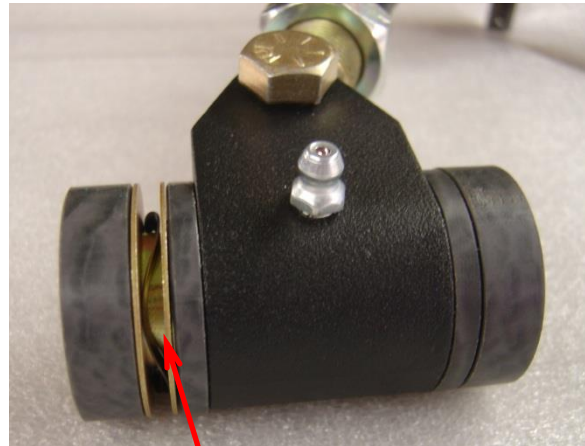


Fig.5



**Washer Location  
POLYURETHANE**

Fig.6



**Washer & Wave Spring Location  
SOLID bushing option ONLY**