

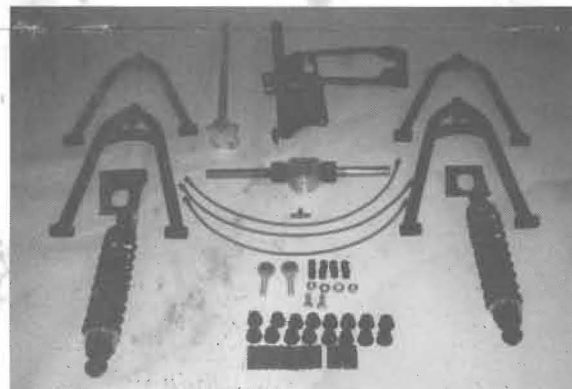
# PILOT LONG TRAVEL FRONT SUSPENSION PARTS CHECK LIST

## ✓ LIST

- ☒ 2 ea. Upper A-Arms with Bushings.
- ☒ 2 ea. Lower A-Arms with Bushings.
- ☒ 1 ea. Rack & Pinion Steering Box.
- ☒ 1 pair Shocks.
- ☒ 2 ea. Tie Rods.
- ☒ 1 ea. AN3 x 11" Brake Hose.
- ☒ 1 ea. AN3 x 33" Brake Hose.
- ☒ 1 ea. AN3 x 38" Brake Hose.
- ☒ 1 AN3 Male Tee.
- ☒ 1 ea. AN3 Male to 10 mm x 1.0 Adapter.
- ☒ 2 ea. Steering Box Mounting brackets.
- ☒ 2 ea. 11/16" x 18 Ball Joints with (2) Jam Nuts.
- ☒ 2 ea. 14mm x 1.50 Ball Joints with (2) Jam Nuts.
- ☒ 2 ea. Lower Ball Joint Seal Kit.
- ☒ 2 ea. 7/16" x 20" x 1-1/4" Hex Bolts.
- ☒ 2 ea. 7/16" x 20" Ny Lock Nuts.
- ☒ 2 ea. 3/8" x 24" x 2-1/4" Hex Bolts.
- ☒ 2 ea. 3/8" x 24" Ny Lock Nuts.
- ☒ 6 ea. Zip Ties for Brake Lines.
- ☒ Instructions

## MODIFIED CORE PARTS

- ☒ 1 ea. Steering Shaft.
- ☒ 1 ea. Steering Shaft Housing.
- ☒ 1 ea. Left Front Spindle.
- ☒ 1 ea. Right Front Spindle.



# PILOT LONG TRAVEL FRONT SUSPENSION KIT ASSEMBLY INSTRUCTIONS

Thank you for purchasing a Pilot Long Travel Front Suspension Kit.

We will outline the assembly procedure to make installation as easy as possible.

The Pilot Long Travel Front End Kit is assembled with precision fixtures to insure a precise fit on your Pilot.

As with most, after market parts fit may vary slightly, if you encounter problems on your particular car, please call with questions **before** you modify any parts.

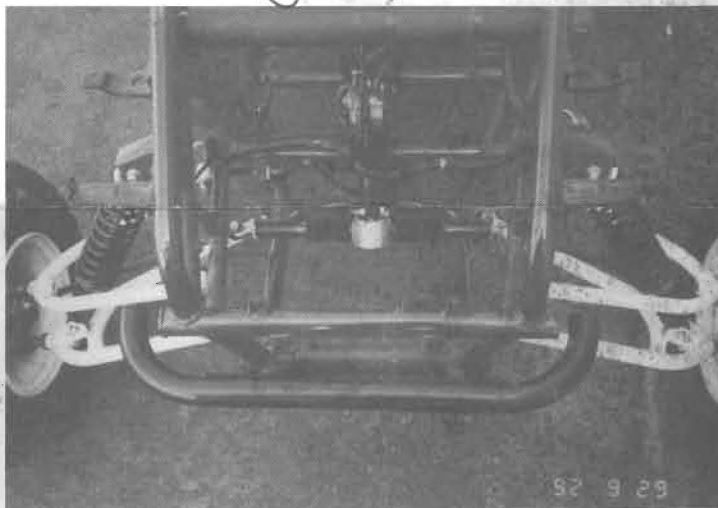
Sincerely,

*Bill Sergent*

Bill Sergent  
Hi-Performance ATV  
246 Denny Way  
El Cajon, CA 92020  
Phone (619) 448-8802  
Fax (619) 448-6974

Ball joints - upper - '72 volks bug front tie rod  
end (R)  
Lower DANA ES-140R

DANA ES 140 R.  
'72 volks bug front tie rod right.



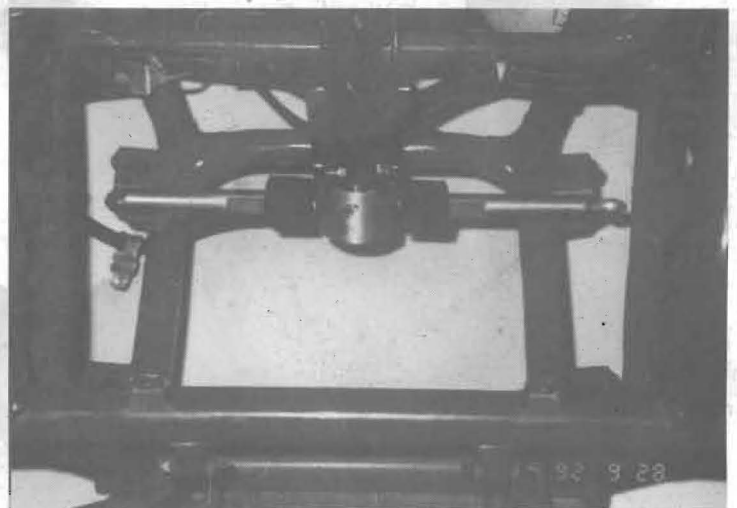
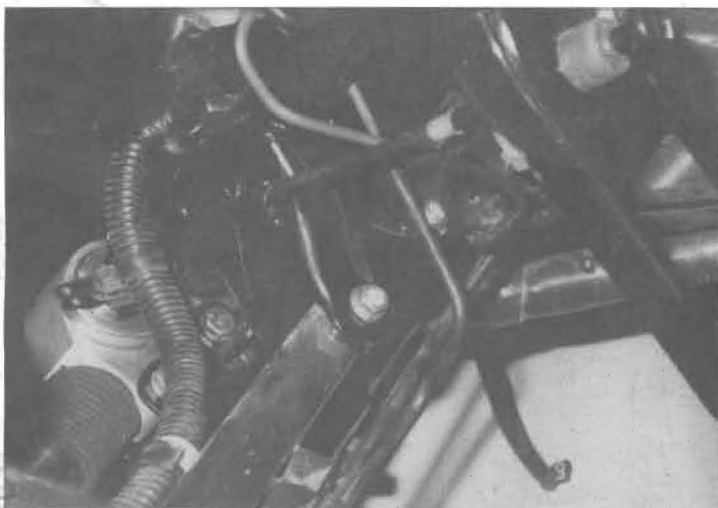
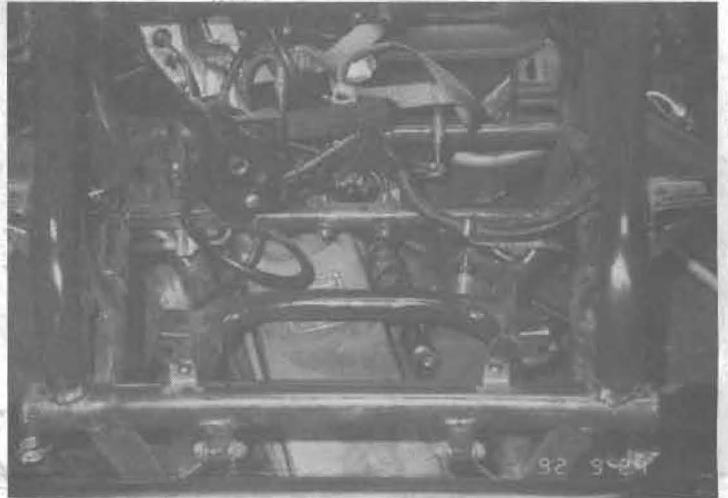
1. Jack up Pilot so front wheels are off the ground.
2. Remove wheels, front plastic outer body panels, and inner plastic floor tub assembly.
3. Remove brake lines at the adapter fitting going from hard lines to rubber lines just below steering yoke.
4. Remove wheel hubs.
5. Remove front spindles.
6. Remove front shocks and all A-Arms.
7. Install all nuts back on bolts finger tight, and don't lose them (note Honda charges approx. \$100.00 for each nut and bolt you lose, so be careful not to misplace them).
8. Remove upper steering yoke, and set aside.
9. Remove steering shaft and steering shaft housing.
10. Core parts. Core parts. Core parts.

10a. We highly recommend that you send the steering shaft, steering shaft housing, and both front spindles to us for modification. It is a very easy procedure for us to modify these parts, and very inexpensive for you to ship them to us. It may be difficult for you to modify these parts. Welding and machine work is required and alignment is critical for proper action.

Please take the time to box and ship these parts to us and they will be returned with your front suspension kit.

### REASSEMBLY

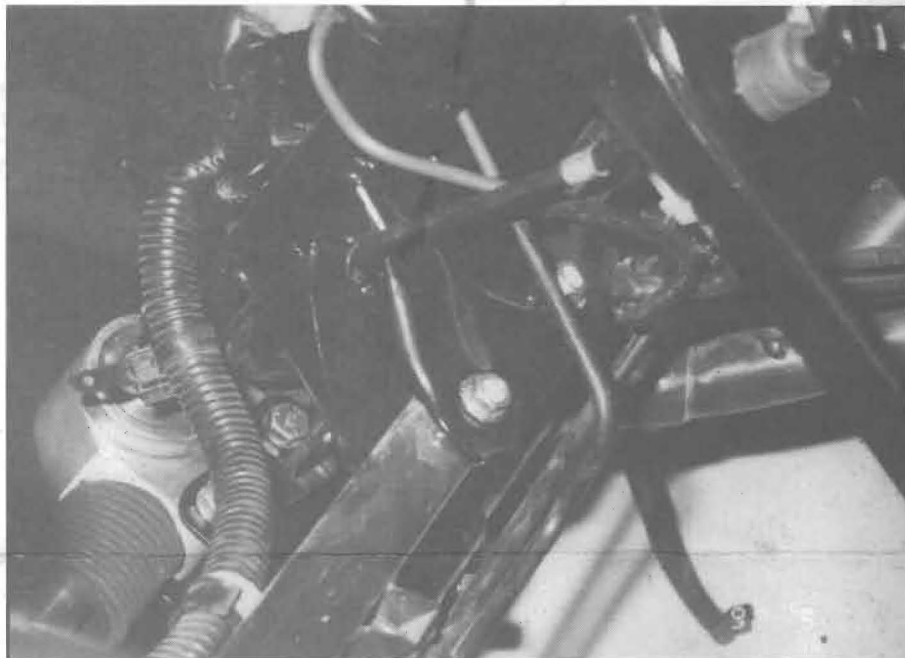
11. Install **modified** steering shaft into **modified** steering shaft housing. Use assembly lubricant on upper and lower steering bushing area's.
12. Bolt steering shaft housing onto your Pilot.
13. Reinstall steering yoke on steering shaft. Rotate yoke from side to side, check for free play and check for up and down movement. Do not install steering shaft housing lower mounting bolts at this time.
14. Have your technical assistant (wife, son, or dog) hold the steering yoke centered. Use a tape measure and center Steering Rack & Pinion Box. Measure from Steering Box housing to end of rack gear.
15. NOTE: Rack & Pinion Steering Box. The mounting bolts holes go down and the round top edge of box is upward.



16. When steering rack is centered install male splines on steering box into female splines on steering shaft. This is rated X so make sure installer is over 21 years old. Tighten steering shaft Pinion cross bolt.
17. Install split tube bracket assembly on lower center frame cross member.
18. Install Rack & Pinion steering box support Z bracket under lower steering shaft housing mounting plate.
19. Rotate split tube bracket so steering box mounting holes align with the Lower Bolt holes on steering box.
20. Install lower steering shaft housing bolts through lower steering shaft housing mounting brackets and through Z support brackets.
21. Install Rack & Pinion steering box mounting bolts Z bracket, steering box and split tube bracket.
22. Slowly tighten all mounting bolts – check for binding or pinching on steering shaft. If you encounter any problems at this point, call us.
23. After bolts are tight – check steering for binding.

#### A-ARM DIRECTION

24. Install all A-Arms and Shocks.  
NOTE: Works Perf. Shocks mount with body up, shaft down.
25. Install lower and upper A-Arm Ball Joints. Install grease seals on lower A-Arm Ball Joints. Leave approx. 4 threads exposed between Lower Ball Jam Nut and Ball Joint.
26. Install spindles and Lower Ball Joint mounting nut. Do not tighten Upper Ball Joint mounting nut at this time.
27. Install brake line kit.
28. Install brake hub – wheel hub assemblys and install wheels and tires.
29. Lower Pilot Front end on the ground. With wheels centered, use a framing square and set wheel chamber at 1° degree - 5° degrees upper positive. The top of the tire will be about 1/4" outward tilt. Tighten all Ball Joint Jam nuts, and Ball Joint Pivot Shaft mounting nuts. Install cotter key in Lower Ball Joint castle nuts.



Progressive suspension shocks shown in this photo.

NOTE: Works performance shocks mount upside down with body of shock up, shaft down.



30. With the help of your assistant, hold the steering yoke centered. Place wheels in approximately centered position and install tie rods. Snug nuts only. Note: Outer tie rod ends mount on top of spindle steering bracket. Mounting position is critical or steering will not be correct.
31. Use a straight edge and hold it over the outside center portion of wheel – check alignment in relation to rear wheels and Lower Frame rails with a tape measure. When wheels are straight and aligned, measure rear center line of the tires and front center line of tires. Toe in approx. 1/4" to 3/8" when wheels are aligned, tighten.
32. Bleed brakes, use Dot III fluid only.
33. **STOP** – recheck and tighten all nuts and bolts. Check all wires and hoses for binding. Check brakes for proper action.
34. Reinstall all plastic.
- 34A. Tie all cables and brake lines securely.
35. Check steering action – Check for bindage or stiff turning. Call us with any problems before you drive car – (619) 448-8802 – M-F 8 am – 5 pm.
36. Slowly test drive Pilot.
37. Check turning, and braking.

**Remember if you have any installation questions or problems, call (619) 448-8802 or Fax (619) 448-6974.**

