

C4 SKF X-Tracker Conversion Kit

HAC4L-WBK (Wilwood calipers)

HAC4L-FBK (factory calipers)



A STIFFER HUB PROVIDES MANY BENEFITS INCLUDING:

- Wheels run truer during cornering and acceleration
- Reduces deflection of the hub face and wheel for better steering, handling, and vehicle dynamic behavior
- Reduces brake wear due to true running of rotors, which helps reduce brake warranty costs
- Improves both NVH (noise/vibration/harness) characteristics and bearing performance
- Provides designers and systems integrators an alternative to a tapered bearing unit, freeing them to improve overall vehicle performance

Caution: Read complete instructions before starting installation

The Vansteel X-Tracker Hub/Spindle Adapter Kit combines a PoppySpeed Racing aluminum 6061-T6 hub adapter and a Driveshaft Shop C5/C6 30 spline 300M spindle to allow the use of the SKF Racing X-Tracker Hub on 91-96 Corvette rear axles.

SKF's X-Tracker consists of a double row angular contact ball bearing arrangement, in which the outboard row is at a higher diameter and contains more balls than the inner row. This unique design increases the bearing's capacity while improving hub stiffness by 50% over a traditional tapered bearing unit.

The PoppySpeed Racing aluminum hub is CNC milled from billet 6061 aluminum and heat treated to T6 specifications in the USA. It mounts in the stock bearing bracket location and provides provisions for mounting the X-Tracker bearing including machined passages for ABS wiring.

The Driveshaft Shop C5/C6 30 spline 300M spindle allows the C4 half shaft to be compatible with the SKF Racing X-Tracker Hub. As well, the updated spindle provides a significant increase in torque capacity over the stock 27 spline unit. The new spindle does not have a reluctor wheel provision, but the X-Tracker bearing incorporates a built-in ABS sensor which will be used to replace the functionality of the stock ABS sensor.

The kit was designed as a completely bolt-on upgrade. No machining is required, and the kit preserves the stock wheel offset, full ABS functionality, and compatibility with the Wilwood Big Brake Kit (and stock brakes).

Special Tools required:
Metri-Pack 150 Series Crimper and pin tool

Materials required:
Red Loctite 271, Blue Loctite 242, Anti-Seize, Clear RTV

Item	Part Description	Quantity
1	SKF Racing X-Tracker Bearing	2
2	PoppySpeed Racing Wheel Hub Adapter	2
3	Driveshaft Shop 30 spline spindles	2
4	U-Bolt Kit	2
5	ARP 3/8-24 12-point nuts	8
6	Vansteel 84-96 HD Billet Cap Kit (Inner u-joint only)	1
7	290mm shim pack (38mm inner diameter, 2 per pack)	2
8	Spindle Washer	2
9	Spindle Nut	2
10	Zinc Coated Alloy Steel Socket Head Bolts (M12-1.75)	6
11	Stainless Washers (M12)	6
12	ARP Black Anodized 12-Point Bolts (M12-1.75)	6
13	ARP Black Anodized Washers M12	12
14	ARP Black Anodized 12-point Nuts (M12-1.75)	6
15	APR Assembly Lube	1
16	Metri-Pack 150 Series Female Connector	4
17	Metri-Pack 150 Series Connector Pin Lock	4
18	Metri-Pack 150 Series Female Pins	8
19	Metri-Pack 150 Series Seals	8
20	Push Mount Cable Tie 200mm Length	2

REMOVAL OF STOCK PARTS:

1. Raise and secure the vehicle
2. Rear wheels from hubs
3. Transverse leaf spring if equipped
- Coil-over setups can remain connected
4. Tie-Rod end from knuckle
5. Camber rod from knuckle
6. Camber rod mounting bracket from differential carrier
- Store bolts back on carrier and snug
7. Half shaft U-joint retainers on differential side only
8. Cotter pin, wheel nut retainer, spindle nut, and washer
9. While supporting half shaft, push outward on suspension knuckle until diff-side U-joint separates from the yoke shaft.
10. Lower shaft and pull inward toward differential removing the shaft and spindle as a unit.
- Wrap U-joints with tape or clamp to retain bearing cups
11. Brake caliper / parking brake assembly.
- Properly support caliper to avoid damage to brake line and cable conduit
12. Brake rotor from hub
13. Wheel hub mounting bolts, bearing, and bracket





MODIFY STOCK PARTS:

14. Remove U-joint retainers from spindle side of shaft. Separate 27 spline spindle from U-joint and retain wheel spindle washer
— Recommend servicing or replacing U-joints at this time
16. Unpack U-bolt kit (Item 4) and substitute the ARP 3/8 - 24 12-point nuts (Item 5) for the hex nuts that came with the u-bolt kit to provide adequate clearance when installed
17. Connect the 30-spline spindle (Item 3) to the outer U-joint using the U-bolt kit and torque to 26 ft lbs. Use blue thread locker



ASSEMBLE THE X-TRACKER BEARING TO THE HUB SPACER

Note: Save these instructions for future service

18. Remove the blue pin lock from the rear of the connector
19. Using a Metri-Pack pin tool or small paper clip, depress the locking tabs on the terminals and remove the wires through the rear of the connector (Fig. 9)
20. Mount the X-Tracker Bearing to the side of the hub adapter with the raised pads.
21. From the opposite side of the adapter, install the stainless washers (Item 11) and then the M12-1.75 socket head bolts (Item 12) into the counterbore holes with red thread locker and torque to 95 ft lbs.
22. Route the ABS wiring conduit through the hole in the bearing spacer as follows:
 - a. Insert the pins and wire conduit through the hole in the hub adapter that is adjacent to the stock ABS sensor location on the suspension knuckle. This hole is located approximately at the 8 O'clock position when the adapter is installed with the caliper mount facing the front of the car. (Fig. 10)
 - b. Re-insert the pins into the connector and install the pin lock (Fig. 11)





23a



23b



24a



24b



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INSTALL BEARING KIT:

23. Attached the hub bearing assembly to the suspension knuckle using the ARP M12-1.75 bolts (Item 12), washers (Item 13), and nuts (Item 14). See 23 a & b.

- Ensure that the caliper mount is facing the front side of the wheel well when installed
- Use red thread locker on threads and ARP Assembly lube on washers
- Torque to 98 ft lbs.

24. Install the .260mm shim stack (Item 7) onto the spindle

- Using a thin coat of clear RTV, secure the shim stack to the spindle [24a]
- Wrap with blue masking or similar light tape to center the washer until the RTV fully cures [24b]

25. Coat the spindle splines with anti-seize

26. Insert the spindle/half shaft assembly through the back of the suspension knuckle

27. While supporting half-shaft, carefully remove the tape from the U-joint

28. Push the suspension knuckle outward and seat the inner U-joint to the differential yoke shaft

29. Secure U-joint using Vansteel HD Billet Caps and socket head bolts (Item 6)

- Use blue thread locker and torque to 35 ft lbs.

30. Install spindle washer and nut (Items 8 & 9) onto spindle shaft and snug until bearing hub is fully seated against spindle shim stack

- Final torque will be done after installation of caliper/parking brake assembly



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INSTALL ABS CONNECTOR:

31. Cut ABS cable harness 3" past the cable clamp on top of the suspension knuckle on the sensor side of the clamp

32. Remove stock sensor from knuckle and retain mounting bolt

33. Strip 1½" of wire conduit being careful not to nick the wire insulation

34. Install the wire seals (Item 19) with the ribbed section facing away from the cut end of the wire

35. Strip ¼" of insulation from each wire

36. Install pin (Item 18) onto the wire, crimping the wire first, and then the seal

37. Insert pins into rear of Metri-Pack connector (Item 16) until the pin lock clicks

38. Install the wire lock (Item 17) onto the rear of the connector and then secure to the end of the cable conduit

39. Connect the ABS harness to the bearing ABS pigtail

40. If necessary, loosen the cable clamp on top of the suspension knuckle and adjust harness to relieve any strain.

41. Install ABS pigtail mounting bracket (Item 21) using bolt from stock sensor bracket and secure using cable tie (Item 20)



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INSTALL BRAKES:

IMPORTANT: FOR WILWOOD BIG BRAKE KIT INSTALLATION REFER TO WILWOOD INSTRUCTIONS

Stock Brakes:

42. Install brake rotor and secure using two lug nuts
43. Install brake caliper/parking brake assembly
44. Torque to 70 ft lbs using red thread locker
45. Set parking brake and tighten spindle nut
 - Use red thread locker and torque to 118 ft lbs.

Note: The X-Tracker bearing comes pre-loaded so the C5/C6 Torque spec is used

46. Install camber rod mounting bracket to differential carrier housing
 - Torque to 59 ft lbs using blue thread locker
47. Install camber rod to suspension knuckle
 - Torque to 107 ft lbs using blue thread locker
48. Install tie-rod end to suspension knuckle
 - Torque to 33 ft lbs and install cotter pin
49. Install wheels and torque to 100 ft lbs in sequence.
50. Lower vehicle
51. HAUL ASS WITHOUT MAKING TWO TRIPS!

**IT IS RECOMMENDED THAT THE WHEEL ALIGNMENT
BE CHECKED AFTER KIT INSTALLATION**