



Solid Axle Industries  
Installation Instructions for the

## JK SpynTec Hub Conversion Kit

\*Depending on the year / model inner axle shafts may need replaced to a 760X u-joint yoke.

\*Wheel mounting pattern will change to 5 on 5.5.





Warning - Installation should only be performed by a professional mechanic.



During the installation of the Spyntec front hub conversion kit, always ensure the vehicle is properly supported and prevented from rolling. Do not use a jack to support the vehicle. Always use properly rated jack stands in good working order. Make sure all vehicle work is performed on a hard, level, and stable surface. An unstable vehicle can fall and can kill or injure you.



Always wear proper safety gear. Debris can fall from the vehicle as well as tools failing. Wear your safety goggles.



For all fastener torque values and disassembly procedures, refer to the Jeep Service Manual. These are available from your Jeep dealership. Torque values and disassembly / assembly pictures shown are only for reference.



Before starting inspect that the length of stud supplied is long enough for the wheels chosen. Thread engagement should be at least equivalent to the diameter of the stud.



As always, re-torque lug nuts to manufacturers' specifications after 50 miles. It's also a good preventative measure to do so after heavy off roading.

## SOLID AXLE PRODUCTS

LIMITED LIFETIME MATERIAL AND WORKMANSHIP WARRANTY

Solid Axle Industries, LLC warrants to the original purchaser that the Solid Axle Products covered by this Warranty as specified below to be free from defects in materials and workmanship under normal off road use and service. To apply for warranty coverage, the original purchaser must present proof of purchase verification acceptable to Solid Axle, such as a copy of the original purchase receipt. The obligation under this Warranty shall be limited to the repair or exchange of any part or parts which may thus prove defective under normal off road use and service by the original purchaser, and which our examination shall disclose to our satisfaction to be thus defective. In order to claim the Warranty, you must return the parts in question, shipping charges prepaid, to Solid Axle at the address given below or a factory authorized servicing distributor, together with your name, address, telephone number, a brief description of the defect and your proof of original retail purchase for each product returned for warranty service. Exclusions from this Warranty are those specified below. Only products which are sold bearing the "Solid Axle" trademark are covered by this Warranty. Products or components expressly excluded below are not covered by this Warranty. If the product or component has been damaged by use in racing competition or by accident, abuse, collision, overloading, misuse, misapplication, improper installation, improper service or modification of the product without written permission from Solid Axle, it is not covered by this warranty.

**Except as expressly stated herein, there are no other warranties, expressed or implied, including implied warranties of merchantability and fitness for a particular purpose. Any implied warranty of merchantability or fitness for a particular purpose which by law may not be excluded is limited in duration to one (1) year from the date of original retail purchase of the product.**

**The Warranty and the remedies set forth above are exclusive and in lieu of all others, oral or written, expressed or implied.** No Solid Axle dealer, agent or employee is authorized to make any modification, extension or addition to this Warranty.

In no event is Solid Axle responsible for special, incidental or consequential damages resulting from any breach of Warranty, or under any other legal theory, including, but not limited to, lost profits, down time, goodwill, damage to or replacement of equipment and property, loss of use of the product or any associated equipment, or cost of substituted products.

The above exclusion or limitation may not cover you because some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts. This Warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Solid Axle reserves the right to change Product design without notice or obligation to modify previously manufactured products.

Warranty Claims and Products returned for warranty service should be sent to:

**SOLID AXLE INDUSTRIES, LLC**  
**12356 Mahoning Avenue**  
**North Jackson, Ohio 44451**  
**(330) 538-9791**

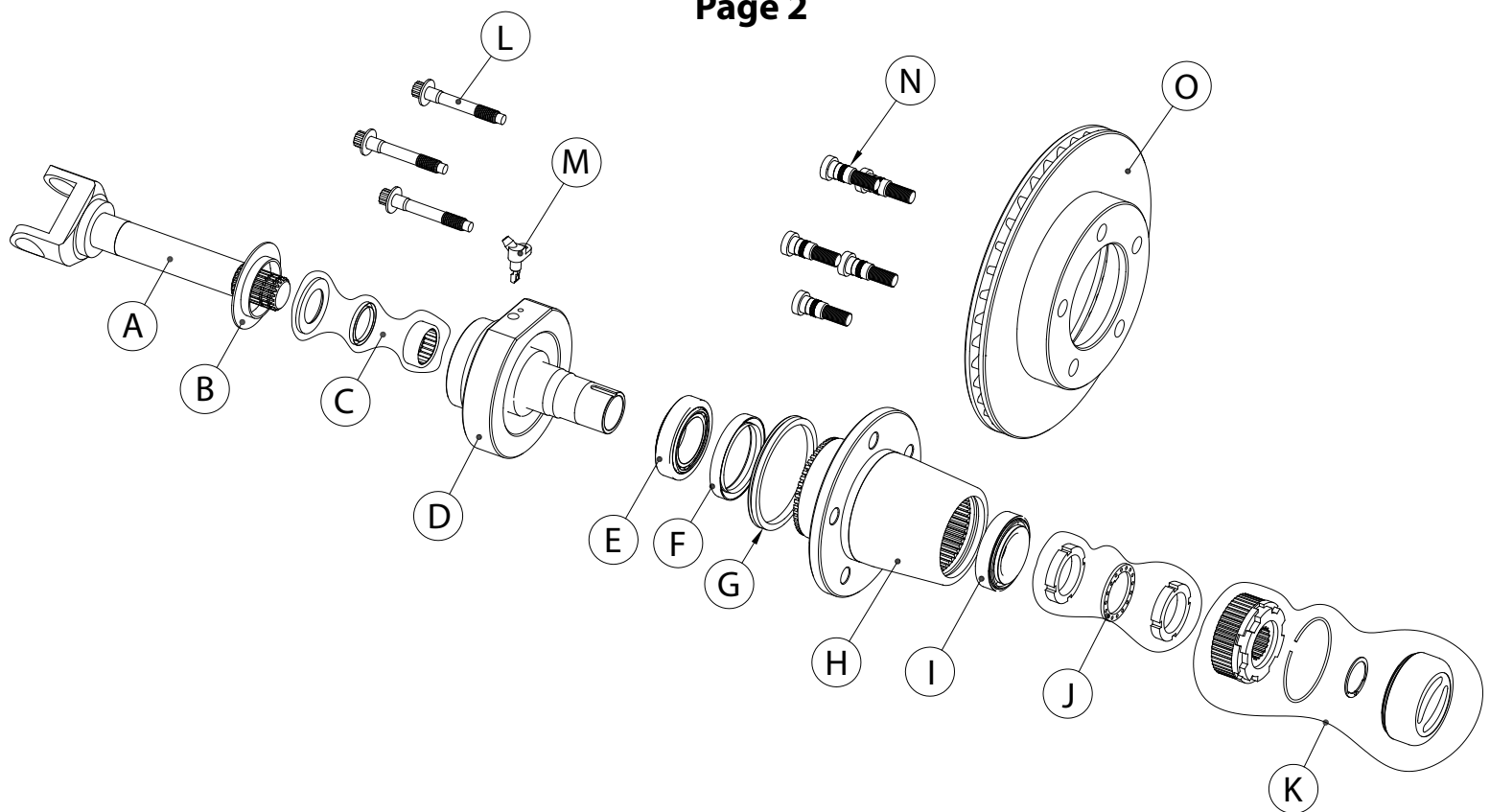
Coverage and Exclusions to this Warranty

Exclusions to this warranty:

Finish, u-joints, seals, bearings, rotors, studs

Products covered by this warranty:

SpynTec Hub Conversion Kit



Key	Description	SAI Part Number	Manufacturer Part	Quantity
A	30 Spline Stub Shaft	SAI 030.10.004.02		2
B	Mud Slinger	SAI 030.10.005.01	Spicer 36364	2
C	Inner Spindle Bearing Kit	SAI 030.10.006.01	Spicer 706527X	2
D	Spindle	SAI 050.10.001.03		2
E	Inner Wheel Bearing	SAI 050.10.003.10	Timken LM603049	2
	Inner Wheel Race	SAI 050.10.003.11	Timken LM603011	2
F	Hub Seal	SAI 050.10.003.14	Chicago Rawhide CR24881	2
G	V Lip Seal	SAI 050.10.003.15	Chicago Rawhide CR401000	2
H	Hub	SAI 050.10.002.03		2
I	Outer Wheel Bearing	SAI 050.10.003.12	Timken LM501349	2
	Outer Wheel Race	SAI 050.10.003.13	Timken LM501310	2
J	Spindle Nut Kit	SAI 050.10.005.01	Spicer 28068X	2
K	Lockout Hub Assembly	SAI 050.10.020.02	Warn 60150	1
L	Factory Spindle Screws	Reuse		6
M	Factory ABS Sensor	Reuse		2
N	Wheel Stud	SAI 050.00.004.01	Dorman 610-219	10
O	Rotor (ID 4.00)	SAI 060.00.002.05	Raybestos 3552	2

## Tools and Supplies Needed:

Floor Jack  
 Jack Stands  
 5 mm Hex Wrench  
 13 mm 12 Point Socket  
 36 mm Socket  
 21 mm Socket  
 Deadblow Hammer  
 Flat Blade Screw Drivers  
 Grinder or Belt Sander  
 Spindle Nut Socket  
 Snap Ring Pliers  
 Wheel Bearing Grease  
 Emery Cloth  
 Anti Seize



1a

1a- After the wheel is unbolted, the brake caliper will need to be removed. A 21 mm socket or wrench will be needed.

1b -The factory rotor can now be removed.



Brake pads may contain asbestos. DO NOT use compressed air. Use a readily available brake cleaning fluid. Asbestos has been found to be a cancer causing agent.

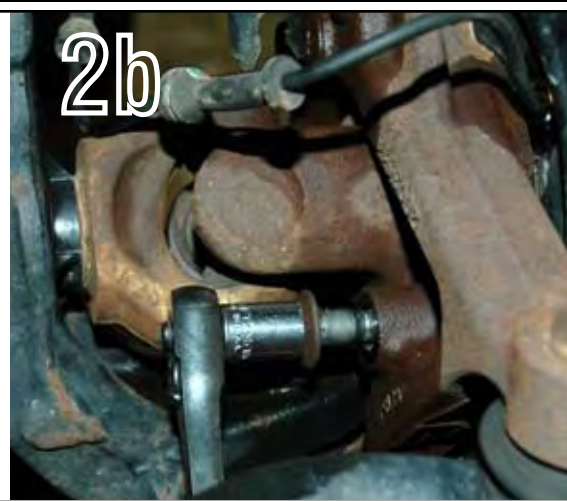


1b



2a

2a -Next, a 36 mm socket and ratchet will be required to remove the axle, you will see three 12 point screws clamping the unit bearing to the knuckle. Carefully remove these (13 mm socket) as they will be reused during re-assembly. Sometimes a slight tap on the socket will ensure proper seating.



2b



3a

Use a 5 mm hex key to remove the screw from the sensor, but do not remove the sensor at this time as it may be damaged. Carefully tap on the unit bearing to separate it from the knuckle. Pay close attention to not ruin the metal dust shield as this will be reused. Once the bearing is separated from the knuckle, remove the sensor by pulling it straight out.



3b



4a

With the sensor removed the shaft assembly can now be removed (4a).

4b -Clean the knuckle bore and surface with fine emery cloth.



4b



## Page 4

5a -Using a small screw driver and hammer, tap the ujoint retaining clips from the inner axle shaft.

5b -Once the clips are removed go ahead and press the u-joint from the shaft.



5a



5b



6a

6a -Install the mud slinger (Item B) onto the stub shaft as shown. The ujoint can also be prepped for assembly by removing the caps and placing the joint in the shaft.

6b - Gently align the cap to the ujoint cross paying close attention not to move the needle bearings from the wall of the cap.



6b



7a

7a -A gentle tap with a small deadblow hammer will seat the cap.

7b - Go ahead and repeat the process for the other side of the ujoint. Tap the caps down until the c-clip groove can be seen. Snap the c-clip onto the cap and repeat the process for the inner shaft.



7b



8a

8a -Once the shafts are assembled, the outer spindle bearings can be greased. The kit already has the inner bearing greased as well as the hub seal installed. For future reference this photo shows the proper way to install the seal. Pay close attention to not damage the reluctor wheel teeth.

8b -Put a light coat of anti-seize on the knuckle face and bore. This will help with removal later on.



8b



## Page 5

9a/9b -The assembled shafts can now be slid into the housings.



9a



9b



10a

10a -Slide the V lip Seal over the mud slinger as shown. Apply a thin film of grease on the lip.

10b -Slide the thrust washer with the chamfer side toward the center of the vehicle. This will sit flat up against the shaft. If installed incorrectly, there will be a gap between the thrust washer and the shaft.



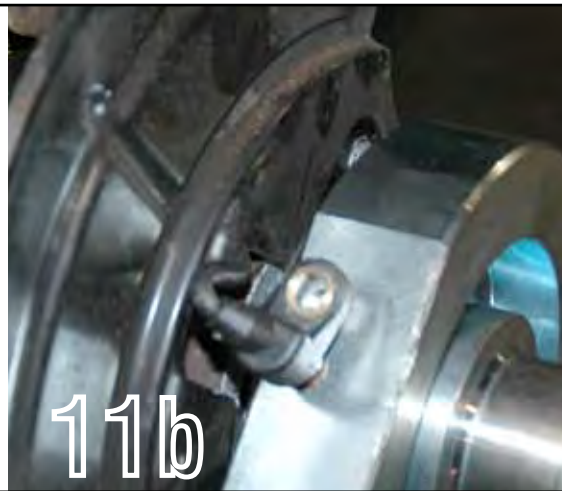
10b



11a

11a -Slide on the factory brake dust shield and pilot the spindle in the knuckle. Route the ABS sensor through the metal dust shield.

11b - Install the sensor BEFORE the spindle is completely seated in the knuckle. Ensure once again that the routing of the cable will not get cut on the bracket. The sensor will be a tight fit into the spindle. Make sure the sensor hole is aligned with the tapped hole.



11b



12a

12a -Install the sensor screw with a 5mm hex wrench.

12b -At this point the factory screws will need to be cut or ground slightly. A belt sander, if available, will make quick work of this. Remove approximately 1/8 to 3/16 of an inch from the "nub" on the screws.



12b



## Page 6

### 13a

13a -Anti seize the spindle screws before installing.

13b -Hand thread the knuckle screws and work your way around in a circular pattern tightening them evenly.

### 13b

### 14a

14a -Stretch the v-lip seal over the hub up to the machined shoulder.

14b -Put a thin film of high quality grease on the lip of the v-lip seal.

### 14b

### 15a

15a -Slide the hub and rotor assembly onto the spindle. Pay close attention that the inner hub bearing seats against the shoulder on the spindle.

16b -Push the outer wheel bearing onto the spindle.

### 15b

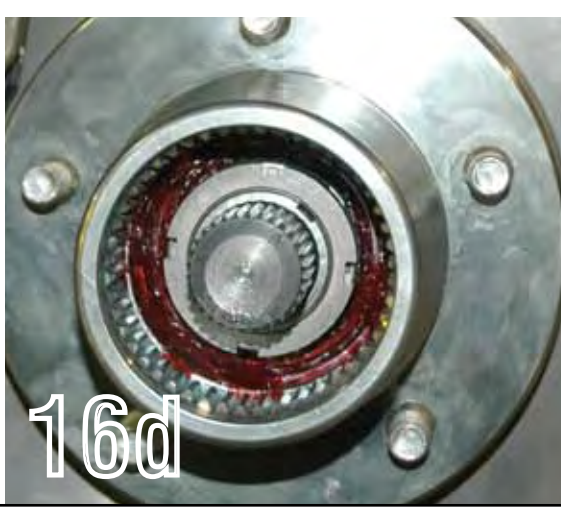
### 16a

### 16b

### 16c

Before going into the installation of the spindle nuts onto the spindle. Look closely at the configurations to the left. 16a shows the nut with the pin facing toward the outside of the vehicle. This is so the tab washer in 16b can lock the nut in place keeping in from turning. 16c is simply a jamb nut pinching the nut washer assembly together.





16d- Thread the inner spindle nut onto the spindle. Using a spindle nut socket and torque wrench, tighten the spindle nut (photo 16a) to 50 ft-lbs. Do not over tighten the nut. Rotate the hub back and forth while tightening. Back off the spindle nut 1/4 turn. Slide on the lock washer (photo 16b). Make sure the pin is aligned with a hole on the nut. Thread the outer nut onto the spindle and torque to 125 - 150 ft-lbs.

There should be no endplay in the assembly at this point. If there is, repeat the process.



17a -Slide the lockout hub body into the wheel hub. You may have to slightly rotate the hub to get the splines located.

17b -Install the axle snap ring using snap ring pliers. A pry bar may have to be used from the backside of the knuckle to shift the shaft forward.



18a -Install the large snap ring into the groove in the wheel hub.

18b -Lightly grease the o-ring on the hub dial body. Set the dial in the free position and align the holes in the dial to the tapped holes in the hub body. Slide the orings on the hex screws and torque to **25-30 in-lbs.**



19a -Place the caliper assembly over the rotor and hand thred in the screws.

19b -Tighten the fasteners to factory specifications.







20 -The Spyntec assembly is complete at this time. You are ready to place the wheel on and torque down the lugnuts. Make sure you retorque the lugnuts after 50 miles as well as after heavy offroading.