

4320 Aerotech Center Way

Telephone: (800) 350-2223 Fax: (805) 238-4201 Page Rev. Date: 09/05/21 PAGE 1 OF 4

P/N: 50-3020A

## JEEP & SCOUT DANA 20 T/C TAILHOUSING 32 SPLINE OUTPUT

### KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	51-3020	CASTING (Installed by AA)
2.	1	52-3020	SHAFT (Installed by AA)
3.	4	723730	S.H.C.S. 3/8"-16 x 1-1/4"
4.	1	723713	3/8"-16 x 1.25" STUD BOLT
5.	1	723701	3/8"-16 NUT
6.	1	300104P	SPEEDOMETER HOLE PLUG
7.	1	300314	TAPPERED BEARING
8.	1	300491	REAR YOKE END PLAY SHIM (3 sizes) (Installed by AA)
9.	1	300513	BEARING, REAR OUTPUT (YOKE SIDE) (Installed by AA)
10.	1	300514	BEARING, REAR OUTPUT (CASE SIDE) (Installed by AA)
11.	1	300625	SPEEDO RING GEAR (Installed by AA)
12.	1	300627	CIRCLIP, SPEEDO RING GEAR
13.	1	300629	SPEEDOMETER RETAINING CLIP
14.	1	300630	O-RING FOR SPEEDOMETER
15.	1	300922	BREATHER, BRASS ELBOW
16.	1	301403	BOLT- 5/16"-18 x 3/4" H.F.C.S. SPEEDOMETER CLIP BOLT
17.	1	300476	YOKE NUT

NOTE: This kit is 1.5" longer than stock.

THIS KIT SHOULD BE SOLD WITH A YOKE KIT THAT INCLUDES A SEAL, NUT, & YOKE. THIS KIT WILL ALLOW ANY ADVANCE ADAPTERS YOKE KIT TO BE INSTALLED ON THE TAIL SHAFT KIT.





SPECIAL NOTE: The components packaged in this kit have been assembled and machined for specific type of conversions. Modifications to any of the components will void any possible warranty or return privileges. If you do not fully understand modifications or changes that will be required to complete your conversion, we strongly recommend that you contact our sales department for more information. This instruction sheet is only to be used for the assembly of Advance Adapter components. We recommend that a service manual pertaining to your vehicle be obtained for specific torque values, wiring diagrams and other related equipment. These manuals are normally available at automotive dealerships and parts stores.



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## JEEP & SCOUT DANA 20 T/C TAILHOUSING 32 SPLINE OUTPUT

The Dana 20 H.D. output shaft kit is a very simple kit to install. The transfer case can be left in the vehicle for the installation of this kit. Driveshaft modifications will be required due to the 1.5" longer output shaft housing. The use of this kit gives you the advantage of calibrating you speedometer for tire and axle variations.







Remove the (5) fasteners from the stock tailhousing. Remove the tailhousing from the Dana 20 transfer case. The stock tailhousing used a gasket between it and the transfer case. Make sure the gasket is removed completely from the transfer case surface. When comparing the old Dana 20 tailhousing to the new, there are a couple of changes to our tailhousing that you will need to compensate for. The first is the length of our unit which is 1.5" longer, so driveshaft modifications will be required. Second, the speedometer drive on our tailhousing is designed around the later model Jeep tailhousings. This speedometer drive allows you to adjust your speedometer to compensate for larger tires and axle ratio changes. Third is the breather assembly. The stock tailhousing has a metal breather mounted to the top of the tailhousing. Our tailhousing is designed with a brass elbow. Our tailhousing requires a piece of 3/8" fuel hose to be clamped to the brass elbow and a breather to be installed at the opposite side of the hose. We also recommend that this hose be long enough to extend up into the engine compartment to avoid any type of water contamination.









We designed our kit to bolt to the Dana 20 without a gasket. We recommend using a very thin film of RTV blue silicone. Apply a small dab and smooth it out with your finger. Our tailhousing also requires the use of a stud bolt located at approximately 8 o'clock on the case. The stud bolt must be installed so that only .600" is protruding from the case. Make sure the bolt does not go too far into the case and interfere with the Dana 20

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gear. Our tailhousing bolt hole that corresponds to the stud bolt has a milled pocket into which the 3/8"-16 nut must be set into. As you assemble the tailhousing to the case, thread the nut to the stud.



Stud bolt and nut being installed on the new tailhousing



New tailhousing being installed. Be sure to check spline alignment between our shaft and your stock gear.



New tailhousing installed. The new bolts need to be torqued to 30ft./lbs. Turn the yoke to make sure the unit is not bound up or is not binding.

Fill your unit with the recommended oil.

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# JEEP & SCOUT DANA 20 T/C TAILHOUSING 32 SPLINE OUTPUT

Speedometer Calibration: There are two factors that affect your speedometer reading; actual tire diameter and axle gear ratio. The actual tire diameter is usually different than what is printed on the side wall of your tire. For example: A 33 x 11.5 x 15 tire (depending on the brand), may actually measure 32.5" in diameter. Tire sizes vary greatly among the suppliers. Even the same tire from the same manufacturer can vary as much as 7% in diameter.

			AD	VERTIS	SED TIRE DIA	AMETE	R			
		37"	36"	35"	33"	32"	31"	30"	29"	28"
	5.13	36T	37T							
	4.88	34T	35T	39T	41T					
GEAR	4.56	32T	33T	35T	36T	37T	37T	38T		
RATIO	4.10	29T	30T	33T	34T	35T	36T	37T	38T	39T
	3.73	26T	27T	31T	32T	32T	33T	34T	34T	35T
	3.55			30T	31T	31T	32T	33T	33T	34T
	3.07			26T	26T	27T	27T	28T	28T	29T

Listed below are a few of the part numbers for the Jeep speedometer pinion gears to calibrate your speedometer.

300620-26	SPEEDOMETER GEAR-LONG	26 TOOTH
300620-27	SPEEDOMETER GEAR-LONG	27 TOOTH
300620-28	SPEEDOMETER GEAR-LONG	28 TOOTH
300620-29	SPEEDOMETER GEAR-LONG	29 TOOTH
300620-30	SPEEDOMETER GEAR-LONG	30 TOOTH
300620-31	SPEEDOMETER GEAR-LONG	31 TOOTH
300620-32	SPEEDOMETER GEAR-LONG	32 TOOTH
300620-33	SPEEDOMETER GEAR-LONG	33 TOOTH
300620-34	SPEEDOMETER GEAR-LONG	34 TOOTH
300620-35	SPEEDOMETER GEAR-LONG	35 TOOTH
300620-36	SPEEDOMETER GEAR-LONG	36 TOOTH
300620-37	SPEEDOMETER GEAR-LONG	37 TOOTH
300620-39	SPEEDOMETER GEAR-LONG	39 TOOTH
300620-40	SPEEDOMETER GEAR-LONG	40 TOOTH
300620-41	SPEEDOMETER GEAR-LONG	41 TOOTH
300620-42	SPEEDOMETER GEAR-LONG	42 TOOTH
300620-43	SPEEDOMETER GEAR-LONG	43 TOOTH



This tailhousing offers a speedometer option (sold separately). This tailhousing is designed to fit a stock Jeep (1983-86) mechanical driven speedometer housing. Vehicles requiring a cable connection for the speedometer can order P/N 301506. The speedometer gear is not included with this housing, but by using the charts above you can select the correct gear for your tire size and axle ratio.

If your stock cable does not fit this speedometer housing or if you require additional speedometer connections, then we recommend that you contact Nevada Speedometer at (775)358-7422.

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