

# ADVANCE ADAPTERS INC.

P.O. Box 247, 4320 Aerotech Center Way  
Paso Robles, CA 93447

Telephone: (800) 350-2223 Fax: (805) 238-4201

## P/N: 300640

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## TJ SPEEDOMETER KIT

### KIT CONSISTS OF:

No.	Qty	Part No.	Description
1.	1	300638	PINION GEAR HOUSING
2.	1	300639	PINION GEAR SENSOR
3.	1	300629	C CLIP RETAINER
4.	1	301403	BOLT- 5/16"-18 x 3/4" H.F.C.S.
5.	1	722532	1/4"-20 x 3/4" HHCS



### Supplied harness

Orange = 5 volt  
 Blk/Blue = ground  
 White/Orange = signal

### 03-04 TJ Rubicon's

Jeep harness		New harness		
BK/LB	=	BK/DB	=	ground
VT/WT	=	Orange	=	5 volt
WT/OR	=	WT/OR	=	signal

### 05-06 TJ Rubicon's

Jeep harness		New harness		
DB/DG	=	BK/DB	=	ground
YL/PK	=	Orange	=	5 volt
DB/OR	=	WT/OR	=	signal

The late model Jeep TJs with the Rock Trac 241J transfer case used a tone ring and sensor for the speedometer pickup source. This combination is not able to be used on the Atlas tailhousing. The Atlas only accepts the mechanically driven TJ Speedometer. This NP231 style speedometer will work the same as the later model tone ring and sensor. One advantage is the mechanical unit is easy to modify when larger tires or different ring and pinions are used. The charts that follow offer different drive gear part numbers to calibrate your speedometer. This speedometer assembly is offered under **P/N 300640**. The speedometer gear is not included with this housing assembly.

	<b>300637-28</b>	<b>300637-33</b>	<b>300637-38</b>
	<b>300637-29</b>	<b>300637-34</b>	<b>300637-39</b>
Speedometer gears for	<b>300637-30</b>	<b>300637-35</b>	<b>300637-40</b>
the 300640 housing.	<b>300637-31</b>	<b>300637-36</b>	<b>300637-41</b>
See chart on page 2.	<b>300637-32</b>	<b>300637-37</b>	<b>300637-42</b>
			<b>300637-43</b>

**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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TIRE DIAMETER	AXLE GEAR RATIOS							
	5.38	5.13	4.88	4.56	4.10	3.73	3.55	3.07
44"	32T	31T	29T	27T				
42"	34T	32T	30T	28T				
40"	35T	34T	32T	30T	27T			
39"	36T	34T	33T	31T	28T			
38"	37T	35T	34T	31T	28T	26T		
37"	38T	36T	35T	32T	29T	26T		
36"	39T	37T	36T	33T	30T	27T	26T	
35"	40T	38T	37T	34T	31T	28T	27T	
33"		41T	39T	36T	33T	30T	28T	
32"			40T	37T	34T	31T	29T	
31"			41T	39T	35T	32T	30T	26T
30"				40T	36T	33T	31T	27T
29"				41T	37T	34T	32T	28T
28"					38T	35T	33T	29T

**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 manufacturers. Even the same tire from the same manufacturer can vary as much as 7% in diameter.

If you are installing an Atlas in a 1987 or newer Jeep and have not changed your tire size or your axles, your stock speedometer drive gear would remain the same. When installing a speedometer gear with either 39, 40, 41 or 42 teeth, the gear and the housing must be installed separately. These are all large diameter speedometer gears. By first installing the gear into the tailhousing you will be able to tilt the gear shaft up allowing you to position the gear past the Atlas output shaft. Once this gear is in place, the speedometer housing must be aligned with the speedometer gear shaft and indexed into the tailhousing. When installing the speedometer housing, lube the o-ring that contacts the Atlas tailhousing with a bit of oil. This will prevent the o-ring from being nicked upon installation or rotation, causing this housing to leak.

**Speedometer Problems:** No matter what speedometer gear you use, you must make sure that the teeth of the speedometer gear have proper contact with the Atlas output shaft. The speedometer housing can be rotated to achieve proper contact. *Note:* There are three rotation possibilities. Many of the Jeep speedometer housings offer index numbers that reference to the gear tooth count. By lining up the retainer clip with the proper index number, the speedometer gear will work properly. If your housing does not have these index numbers, proper engagement can be obtained by rotating the speedometer housing until the speedometer gear meshes with the output shaft. The slots on the housing will then line up with the retainer clip. If this is not done, the speedometer will not engage properly.

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