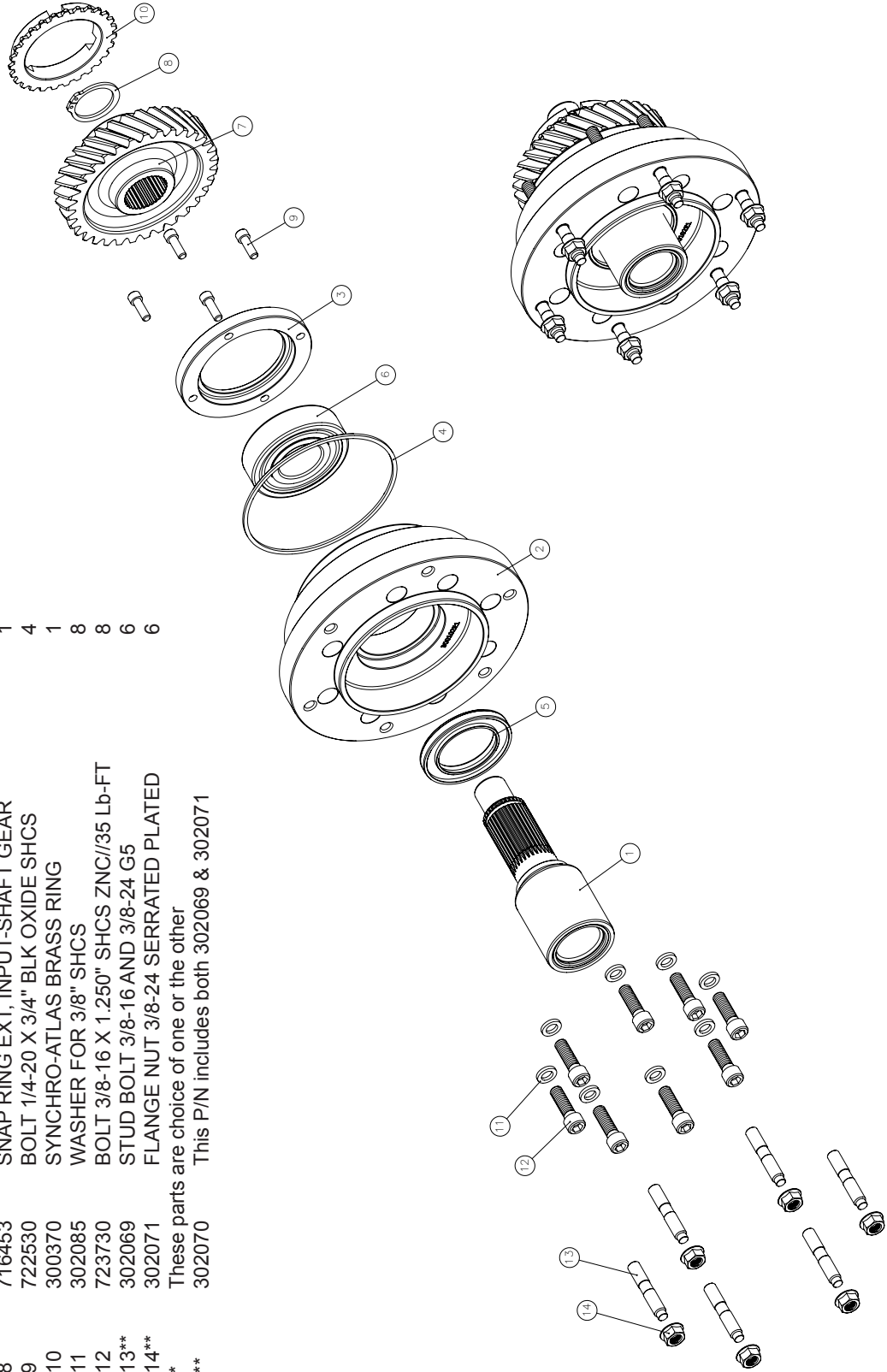


# ADVANCE ADAPTERS

SINCE NINETEEN SEVENTY ONE

P.O. Box 247, 4320 Aerotech Center Way  
 Paso Robles, CA 93447  
 Telephone: (800) 350-2223 Fax: (805) 238-4201  
 PAGE 1 OF 3 Page Rev. Date: 04-05-18  
 P/N: Atlas Front Input

item	part no.	description	qty.
1		SEE OPTIONS ON PAGE 2	1
2		SEE OPTIONS ON PAGE 2	1
3*	300102R	RETAINER-ATLAS HD FRONT INPUT BRG	1
3*	716456		1
4	300490	ORING-ATLAS 4.56" & 5.00" BORE	1
5*	300499	SEAL ATLAS INPUT SHAFT DUAL SPRING VITON	1
5*	300500	SEAL ATLAS INPUT SHAFT DUAL SPRING VITON	1
6	300510	BEARING SINGLE ROW ATLAS FRONT INPUT	1
7		SEE OPTIONS ON PAGE 2	1
8	716453	SNAP RING EXT, INPUT-SHAFT GEAR	1
9	722530	BOLT 1/4-20 X 3/4" BLK OXIDE SHCS	4
10	300370	SYNCHRO-ATLAS BRASS RING	1
11	302085	WASHER FOR 3/8" SHCS	8
12	723730	BOLT 3/8-16 X 1.250" SHCS ZNC//35 Lb-FT	8
13**	302069	STUD BOLT 3/8-16 AND 3/8-24 G5	6
14**	302071	FLANGE NUT 3/8-24 SERRATED PLATED	6
*		These parts are choice of one or the other	
**		This P/N includes both 302069 & 302071	





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**ITEM NUMBER 1 OPTIONS (INPUT SHAFTS)**

#	Item No.	Item Description
1	300012A	SHAFT- ATLAS INPUT 23T (300500 seal)
2	300013A	SHAFT- ATLAS INPUT 23T SHORT (300500 seal)
3	300034A	SHAFT- ATLAS INPUT 34T FORD (300499 seal)
4	300043A	SHAFT- ATLAS INPUT 43T DODGE (300499 seal)
5	300110A	SHAFT- INPUT SHORT 31T FORD FOR 6R80 TRANS. (300499 seal)
6	300111A	SHAFT- ATLAS INPUT 35T SM465 (300499 seal)
7	300112A	SHAFT- ATLAS INPUT 23T (300500 seal)
8	300113A	SHAFT- ATLAS INPUT 29T DODGE (300499 seal)
9	300114A	SHAFT- ATLAS INPUT 10T GM (300500 seal)
10	300115A	SHAFT- ATLAS INPUT 31T FORD (300499 seal)
11	300116A	SHAFT- ATLAS INPUT 32T GM (300499 seal)
12	300117A	SHAFT- ATLAS INPUT 27T GM (300500 seal)
13	300118A	SHAFT-ATLAS INPUT 28T FORD (300500 seal)
14	300119A	INPUT SHAFT- ATLAS INPUT 21T JEEP (32MALE) (300500 seal)
15	300120A	SHAFT- ATLAS INPUT 25T (300500 seal)
16	300121F	SHAFT- ATLAS INPUT 43T FORD 6R140 (300501 seal)

**6 SPLINE INPUTS**

17	300112	SHAFT- ATLAS 6 SPLINE INPUT 23T (300500 seal)
18	300113	SHAFT- ATLAS 6 SPLINE INPUT 29T DODGE (300499 seal)
19	300115	SHAFT- ATLAS 6 SPLINE INPUT 31T FORD (300499 seal)
20	300116	SHAFT- ATLAS 6 SPLINE INPUT 32T GM (300499 seal)
21	300117	SHAFT- ATLAS 6 SPLINE INPUT 27T GM (300500 seal)

**ITEM NUMBER 2 OPTIONS (INPUT HOUSINGS)**

1	300102	RETAINER- ATLAS INPUT 4.56 INDEX
2	300102A	RETAINER- ATLAS INPUT LH 5 INDEX
3	300102B	RETAINER-ATLAS INPUT LH Ford 43 SPL. Lg SEAL
4	300102C	RETAINER- ATLAS INPUT RH 5 INDEX
5	300102HD	RETAINER- ATLAS HD LH INPUT 5 INDEX GM
6	300107	BRONCO INPUT 4.56" INDEX.

LATER 5" INDEX CASES USED AN ADAPTER FOR THE BRONCO WITH A STANDARD ATLAS INPUT

**ITEM NUMBER 7 OPTIONS (INPUT GEARS)**

1	309115-FF	1.5:1 INPUT GEAR
2	309115-FFA	2.11:1 INPUT GEAR (CURRENT 2.0:1 UNITS BUILT AFTER 4/14)
3	309120-FF	2.09:1 INPUT GEAR (OLD 2.0:1 UNITS BUILT BEFORE 4/14)
3	309130-FF	3.0:1 INPUT GEAR
4	309138-FF	3.8:1 INPUT GEAR
5	309143-FF	4.3:1 INPUT GEAR
6	309150	5.0:1 INPUT GEAR

The front input has under gone several updates over the years. Most of these can be identified by the serial number of the transfer case and some do require a visual identification.

**Input shafts:** *November 2007.* Change over to 32 spline input gear on all ratios. All serial number from here on started with a "G".

*In 2010* we dropped the "G" on the serial numbers and machined serials into the case, 6 digits.

*In 2016* a new serial number referring to the manufacturing date was used. Current serial numbers are 7 digits ( first digit is last number of the year, next two are the week that the case was machined and the last four are a numerical sequence. We start every year with 0001.)

**Input Housing:** *January 2014.* Change over to a 5" index on the input as well as 8 bolts fastening the housing to the case. The earlier inputs were a 4.56" index into the case and used 6 bolts.

The earlier retainer always used a snap ring P/N 716456 to retain the input bearing as well as some of the newer 5" indexed housing.

*In January 2016:* We updated all Atlases to the bolt on bearing retainer shown on page one.

### ***Input sub-assembly:***

1. Install the bearing into the aluminum housing and then install the bearing retainer onto the housing. Loctite the 1/4-20 bolts and torque to 7 ft. lbs. On the snap ringed inputs install the snap ring.
2. Once the seal is identified to be correct for the shaft to be used, press the seal into place. Either P/N 300499 or 300500.
3. Press the input shaft from the seal side into the bearing, use some assembly lube on the seal so the shaft slides down the rubber surface of the seal.
4. Slide the input gear onto the male splines that are showing. The snap ring should be exposed that retain the gear. Note: if the shaft is not fully pressed into the bearing, you will not see the snap ring groove or will not be able to seat the snap ring into the groove. This would require you to press the shaft further from the seal side to make sure it is fully pressed into the bearing.
5. Install the snap ring to retain the gear.
6. Install the O-ring onto the input housing and the brass synchro ring before installing back onto the case.



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### ***Input dis-assembly from Atlas case:***

Once the Atlas is removed from the vehicle, drain the oil. Remove the brass elbow on the top of the transfer case. Shift the unit into 4WD low range (both shift rods back into the case). Set the unit up-side-down on a work surface. Remove the 14 access cover bolts and the cover itself. The cover is sealed to the case, so it is a little tough sometimes to separate from the case. Note: the Atlas has used several different styles of fasteners over the years.

Once the cover is off, you will need to remove the cluster pin bolts from both the front and rear of the transfer case, Note: Atlas 1.5:1, 2.0:1 and 3.0:1 ratios do not require the cluster gear to be removed.

From the front of the transfer case, push the cluster pin out of the case. You should be supporting the cluster gear with one hand as you push out the cluster pin with the other.

Once the cluster pin is removed, you will need to remove the cluster gear from the case. Be careful so that the caged needle bearings do not fall out of the cluster. Set the cluster gear aside and remove the two thrust washers from the case. These washers fit between the cluster gear and the inside of the case.

Remove the 6 Atlas input ring bolts (8 bolts on cases 2014 and newer) and remove the input ring assembly from the transfer case. Remove front input

### ***Input assembly to Atlas case:***

Before installing the input assembly onto the transfer case, a new o-ring must be installed to seal the input ring to the case.

You are now ready to install the input ring to the case assembly. Care should be taken to make sure the brass synchronizer ring lines up properly with the synchronizer dogs. Failure to line these up can cause internal damage to the unit.

Once the input is properly aligned, you will be required to line the 6 counter sunk holes with the case assembly (8 holes on 2014 & newer cases). The input ring only bolts to the case, in one rotation. Once the holes are lined up, install the bolts using Loctite 242 and torque these bolts to 40 ft./lbs.

Reinstall the two cluster gear thrust washers into the Atlas case and set the cluster gear into the case.

Helpful hints for installing the Atlas cluster gear. Grease the back sides of the thrust washers and set the washers into the case. Ensure that the tabs of the thrust washers fit the slots of the Atlas case. The grease help hold the thrust washers in place while the cluster is installed. Install the cluster pin on one side just enough to hold one on the thrust washers in place. Slip your finger into the cluster pin hole on the opposite side to retain the other washer in place. If the washer falls down you will have to re-mover the gear and repeat the process. Many times the washer will fall half way down and prevent the cluster pin from going in.

After you succeed in the installation, do a visual check from the access pan to verify that the washers are in place.

As the pin gets closer to being fully installed, install the small o-ring on the cluster pin. The pin must be installed far enough through the opposite side of the case to expose the other o-ring groove to install the new o-ring and thereby properly sealing the Atlas transfer case.

Install the cluster pin bolts on both the front and back of the Atlas case to properly retain the cluster pin, preventing the pin from turning.

Install the new pan gasket and reinstall the 14 access cover bolts. Torque bolts to 17 ft./lbs. Before reinstalling the unit into the vehicle, check it for proper shifting. Reinstall unit as per the installation directions and fill with the recommended fluid.