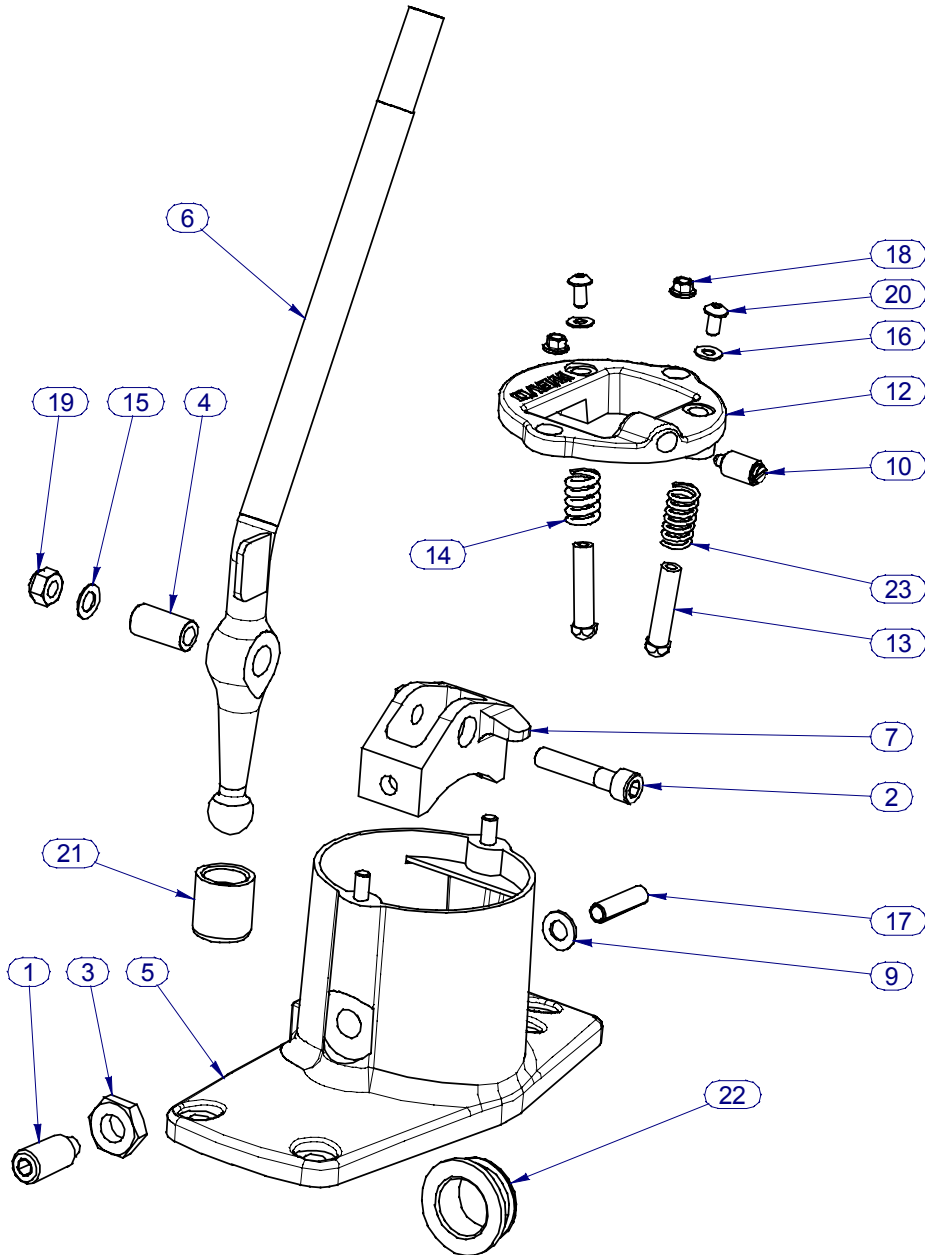


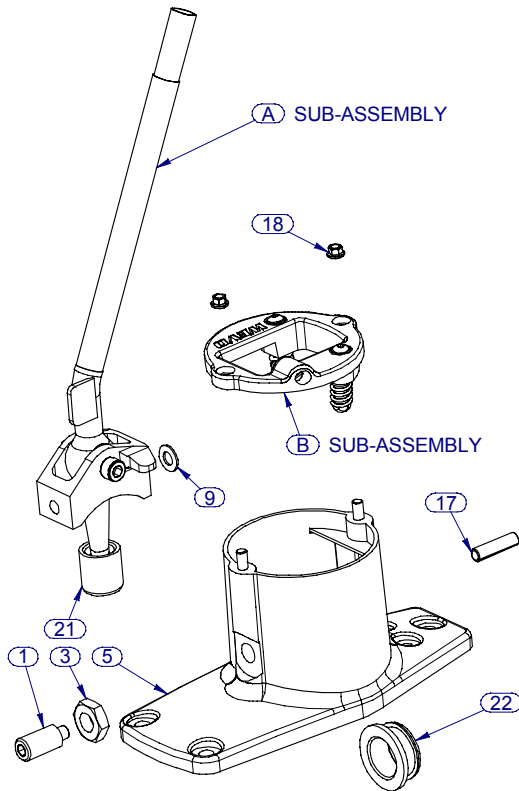
# WEVO Shifter

## 901



ITEM	PART #	PART NAME	QTY.	IN KIT
1	911.424.335.00	O.E. THREADED PIN	1	NO
2	67221366	CAP HEAD BOLT - PLATED - M8 x 40	1	YES
3	N 011 113 3	O.E. NUT - M14	1	NO
4	B58-8	BRONZE BUSH Ø.500" OD x Ø8 ID x 25.4	1	YES
5	911.424.019.06	O.E. 915 SHIFTER BASE	1	NO
6	XT_106	LEVER - WEVO 901 SHIFTER	1	YES
7	XT_060	PIVOT BOX - STD 915	1	YES
9	900.025.007.02	O.E. WASHER - M8	1	NO
10	PLUNGER 5.44	SPRING PLUNGER - SHORT - M10	1	YES
12	XT_068	TOP PLATE - WEVO SHIFTER	1	YES
13	XT_061	DETENT PLUNGER - WEVO SHIFTER	2	YES
14	SPRING 2.8	COIL SPRING Ø14 x Ø2.8 x 20.5	1	YES
15	W34-8	WASHER - M8	1	YES
16	67581645	WASHER - SS - M5	2	YES
17	900.197.035.01	O.E. ROLL PIN Ø8 x 28	1	NO
18	K-NUT M6	K-NUT SELF LOCKING NUT - M6	2	YES
19	N68-8	NYLOC NUT - M8	1	YES
20	68017649	BUTTON HEAD SCREW - SS - M5 x 10	2	YES
21	911.424.139.00	O.E. BALL SOCKET	1	YES
22	914.424.224.00	SHIFT TUBE BUSHING	1	YES
23	SPRING 1.8	COIL SPRING Ø12.2 x Ø1.8 x 25.4	1	YES

# WEVO Shifter 901



ITEM	PART #	PART NAME	QTY.
1	911.424.335.00	O.E. THREADED PIN	1
A	MULTI	LEVER - SUB ASSEMBLY	1
3	N 011 113 3	O.E. NUT - M14	1
5	911.424.019.06	O.E. 915 SHIFTER BASE	1
9	900.025.007.02	O.E. WASHER - M8	1
B	MULTI	TOP PLATE - SUB ASSEMBLY	1
17	900.197.035.01	O.E. ROLL PIN Ø8 x 28	1
18	K-NUT M6	K-NUT SELF LOCKING NUT - M6	2
21	911.424.139.00	O.E. BALL SOCKET	1
22	914.424.224.00	SHIFT TUBE BUSHING	1

## INSTALLATION INSTRUCTIONS

Your WEVO Shifter kit has been partially assembled. The pre-assembly of units A and B includes lubrication with synthetic grease. No additional preparation or removal of grease from these parts is required. The WEVO 901 Shifter has been designed to use Porsche components from the 915 transmission equipped 911's. You will need to obtain some original Porsche shifter parts, numbered 1,3,5,9 & 17 above. These are original equipment from a 1972 through 1986 911 chassis.

The two small M6 Lock nuts (18), are attached to sub-assembly B, be careful not to misplace these nuts, they are not interchangeable with normal M6 nuts.

The kit will be easiest to install with the Shifter unit removed from your car. Select 3<sup>rd</sup> gear before commencing, this will assist with the installation of the completed unit. Follow normal workshop manual instructions for removal of the shifter. This will vary with cars from 1965 through 1971 with different interior trim levels. In all cases the tools you will require to ultimately remove the Shifter base from the floor pan are an M6 Allen key and an M5 Allen key or an M13 socket and an M10 socket. These five original fasteners are re-used.

With the 915 shifter on the bench, follow the logical sequence to completely dismantle the shifter. Disassemble the Gear lever first by removing the "C" clip retaining rings and extract the pivot pin.

Then carefully remove the Top plate. BEWARE, the Top plate is capturing 2 pre-loaded compression springs that should be released with awareness and control.

Now remove the M14 Nut (3) and remove the Threaded pin (1).

Using a pin punch between 7mm and 8mm diameter, you must drive the 8mm Roll pin (17) inwards to the center of the Shifter base, until the Pivot box can be completely removed from the Shifter base (5). Remove the Roll pin from the O.E. Pivot box.

The inside of your Shifter base housing is probably covered in old and dirty grease. Clean this away to provide a dirt and grease free environment for your new WEVO Shifter pivot mechanism. Also clean the parts 1,3,9 & 17, as they will be used to assemble your WEVO Shifter. Remove and clean the Stock shift knob for re-installation.

Check the top face of the Shifter base casting for irregularities left from the casting process. If you can see any burrs or ridges that cause the surface not to be flat, then these should be removed with a file. The Top Plate assembly (B) of the WEVO Shifter is designed to sit flat on the top of the Shifter base and ridges in this area can adjust the tolerances of the spring Detent plungers and also allow the Top plate (12) to rock side-side after installation. Very little, if any detailing will be required.

## ASSEMBLY

Refer to “EXPLODED VIEW 1” of all components to identify parts discussed below.

Drive the Roll pin (17) into the Shifter base from the outside – until the end is protruding inside just enough to mount the M8 Washer (9) with an additional 0.5mm – 1.0mm (approx.) of Roll pin protruding.

Take the sub-assembly A and install upwards through the Shifter base (5) – Knob first. There is a small amount of grease applied to the pivot holes and the end faces of the Pivot box (7) – do not clean this grease away. You are going to hang the rear pivot hole of the Pivot box (7) onto the exposed Roll pin protruding into this area. Be careful to keep the M8 Washer (9) located on the short piece of exposed Roll pin. Arrange the Gear lever so the ears of the Pivot box (7) are at the same end as the Roll pin.

Insert the Threaded pin (1) into the original location and screw this in until you are located in the front hole of the Pivot box (7).

The Threaded pin (1) should be screwed in until the Pivot box and Gear lever are no longer free to pivot from side to side, then back the Threaded pin out just enough to allow the Pivot box to swing freely from side to side. Install the M14 Lock Nut (3) and lock the screw and nut – checking that you have retained the desired freedom of the Gear lever assembly.

VARIANCE If you have the earliest version Shifter base (5) – used 1972 – 75 part # 911.424.019.05, you will not have parts (1) or (3), but two of the Roll pins (17). The standard Pivot box was shimmed to suit the inside length of the casting. You must shim the end float gap between the Shifter base (5) and the Pivot box (7) using washers or shims at both ends to achieve a tight clearance as established above with the action of the Threaded pin (1).

Once satisfied that the Pivot box is correctly installed, drive the Roll pin (17) all the way in until flush with the outside face of the Shifter base (5).

You should now have the Shifter base assembled with the Gear lever and Pivot box moving freely on the pivots both sideways and forward and backwards.

The Top Plate sub-assembly (B) can now be installed. Lower the complete piece with the brass Detent plungers facing downwards over the Knob and onto the two M6 studs on the top of the Shifter base. Arrange the plate so that the brass plungers will make contact with the ears of the pivot box.

Use the two M6 Lock nuts (18) to fasten the Top plate assembly.

Add a small amount of synthetic grease to the outside of the Ball socket (21), as this part is required to slide inside the receiver at the front of the main shift tube inside the tunnel.

You are now ready to install your completed WEVO Shifter and perform the simple set-up procedure.

## INSTALLATION

You will need to remove the “L” shaped bracket with the Shift tube bushing (22) fitted into it. Remove the set screw from the Ball socket receiver on the front end of the main shift tube, this will require a 4mm Allen key. The “L” shaped bracket will be free to slide forwards, off the main shift tube. Use a screwdriver to carefully pry the Shift tube bushing (22) out of the “L” shaped bracket. Lubricate the new part with a small amount of synthetic grease and install per the original. Clean the main shift tube of dirty grease and debris, apply a small amount of synthetic grease to the tube, add a small amount of synthetic grease to the new bearing and re-assemble. Use blue Loctite on the set screw holding the Ball socket receiver.

The transmission should still have 3<sup>rd</sup> gear selected at this stage – as per the removal notes.

The Gear lever is automatically positioned in the 2<sup>nd</sup> / 3<sup>rd</sup> gear plane. Position the Knob backward about 2 inches from mid point to approximate 3<sup>rd</sup> gear. Offer the Shifter into position and slide the Ball socket into the receiver on the main shift tube inside the tunnel.

The WEVO Shifter should now be sitting flat on top of the tunnel, although possibly not in a lateral position that will allow all the three M8 bolts to be installed. Locate and install the two original M6 screws that attach the shift tube axial bearing – the free floating “L” shaped bracket - under the Shifter base. This is essential before final positioning.

Locate the Shifter base over the three M8 threaded holes in the tunnel. If this can not be achieved without moving the Gear lever against the spring force of the brass Detent plungers, it will be necessary to adjust the shift tube coupler.

The cover between the rear footwell's needs to be opened to allow adjustments to be performed on the shift coupler.

Ensure that 3<sup>rd</sup> gear is still selected; loosen the M8 hex bolt that fastens the pinch clamp gripping the coupler to the main shift tube. The shift tube, with Shifter base now attached will be able to move independent of the transmission, allowing you to position the shifter directly over the three M8 holes in the tunnel. Install and tighten these three M8 bolts to complete the radial positioning of the Shifter.

The Gear lever will be able to move forward and back without moving the transmission – be certain to put the Gear lever in an approximate 3<sup>rd</sup> gear position before tightening the M8 hex bolt through the pinch clamp.

With this tight, you have completed the radial adjustment of the shift coupling. The axial adjustment – fore / aft, needs to be completed to ensure that the Gear lever is correctly related to the Reverse lock-out plunger (10).

Move the Gear lever back into the neutral position, the designed position in neutral is for the spherical ball on the bottom of the Gear lever (6) to be vertically below the pivot axis in the Pivot box (7), this will be the first indication of correct adjustment. Swing the Gear lever over to attempt to select reverse. The rectangular steel plate on the side of the Gear lever (6) should just hit the nose of the Reverse lock-out plunger (10). The Reverse lock-out plunger should not be aimed at the center of the rectangular plate, but rather at the very forward edge, so that a deliberate movement towards reverse is required to hit and depress the Reverse lock-out plunger to allow access to the reverse gear position.

With the hex bolt of the pinch clamp all tight, check that 1<sup>st</sup> gear can be selected and that moving the Gear lever out of 1<sup>st</sup> gear into neutral can be achieved cleanly – without being fouled by the Reverse lock-out plunger (10). The Gear lever will try to stand vertical as soon as 1<sup>st</sup> gear is cleared, positioning itself in neutral of the 2<sup>nd</sup> / 3<sup>rd</sup> gear plane. If the Gear lever is set too far backwards, you will not be able to catch and depress the Reverse lock-out plunger, if the Gear lever is set too far forwards, you will not be able to cleanly select neutral from 1<sup>st</sup> without fouling the Reverse lock-out plunger.

Try to make all changes with 3<sup>rd</sup> gear selected in the transmission, that way the radial adjustment set initially will be maintained while you are making small adjustments fore and aft to the axial setting.

The three M8 cap head screws that hold the Shift base casting to the tunnel are in slightly oversize holes, this also allows for final fine adjustments in either direction when you are finalizing the axial adjustment.

Finally the Reverse lock-out plunger(10) can be adjusted for protrusion from the top plate; this can be used as a fine adjustment to allow you to achieve the correct feel for selecting reverse from neutral. The kit is supplied with the Reverse lock-out plunger in the designed position and this should work well for most applications. The Reverse lock-out plunger has a thread locking paste holding this in position – this can be supplemented with Blue Loctite if you make changes and suspect the Reverse lock-out plunger might subsequently move.

Check that all the hardware is tight, especially the M8 hex bolt through the pinch clamp of the shift coupler.

The stock shifter boot (1973 – 1986) can be installed over the WEVO Shifter Classic Gear lever. Install the stock knob using the waffle section spacer collar, just like the stock shift lever.

Restore the trim and interior of your car and the job is complete.

The WEVO Shifter should be periodically maintained by cleaning and lubricating with synthetic grease. Grit and dust might accumulate in the mechanism, especially in race cars or club event cars that have “off track” excursions. Be aware that the precision of your WEVO Shifter will slowly deteriorate if cleanliness is overlooked.

#### **OTHER RECOMMENDED 901 MODIFICATIONS FOR IMPROVED SHIFTING.**

WEVO PSJ Precision Shift Joint – competition grade shift coupling	\$275.00
PORSCHE “Sport” Engine and Transmission mounts # 911 375 043 07	\$ 86.10 (for 4)
SMART RACING PRODUCTS - Solid Engine / Transmission Mounts	\$ CALL (for 4)

END.