# WEVO 915 Streetlite *Flywheel / Clutch kit*

This clutch and flywheel kit is a high performance unit, derived from a proven competition based system. The clutch parts are engineered for the use conditions determined by AP Racing, the clutch manufacturer. The components in this system have been engineered to endure conditions experienced in normal traffic driving, Autocross, spirited street driving, Rallying and those of the racetrack.

AP Racing has rated this clutch for 315 lb/ft (427 Nm) of torque. The high performance organic friction material on the clutch disc will tolerate elevated temperatures, but as with all automotive clutch systems - care should be taken to avoid continuous thermal abuse

This kit is designed to be installed on either 6-bolt or 9-bolt crankshaft motors, with a standard 915 transmission in an unmodified 911 body shell, 1972 through 1986. There are some variations in mating parts and clutch release mechanism components across this 15-year period; however this WEVO 915 Streetlite has been designed to work with all combinations of the factory cable release mechanisms. Call WEVO with any questions or difficulties encountered during installation. If your car is modified, there is still every chance this kit will work with your modified car, WEVO can assist if you have questions about your specific application.

This kit includes the flywheel, crankshaft pilot bearing, clutch assembly, clutch cover screws, Starter Ring Gear mount screws & nuts, Starter Ring Gear mount top-hat-bushings and Release Bearing adapter.

The O.E. Starter Ring Gear from your original 915 clutch installation and the O.E. Release Bearing are both re-used during the installation of the WEVO 915 Streetlite clutch kit.

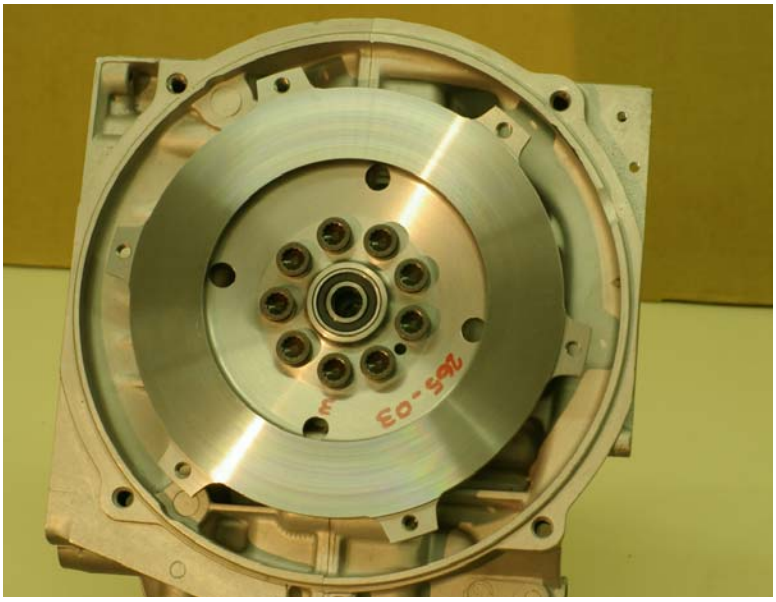
Additional kits are available to allow for different Engine management installations, such as the 3.2 DME Speedring kit and the 3.6 DME Speedring kit. In the future we plan to offer a clutch pedal stop kit that can be used to supplement or replace the O.E. floorboard mounted clutch pedal stop.

These instructions assume an experienced level of technical capability, including execution under good working conditions and performed with accepted good work practices. These instructions also assume the installers will familiarize themselves with the general process of adjusting and maintaining a common competition style clutch system, the requirement of free-play and use caution in applying Porsche specific workshop practices to this system where they do and do-not apply.

**FLYWHEEL**

The new WEVO 915 Streetlite flywheel can be installed in the condition it is supplied. If your existing 9 bolt factory flywheel has the pilot bearing attached to the crankshaft by 3 x M6 screws, then this assembly should be removed. The pilot diameter of the 915 input shaft is compatible with the new ball bearing used in the WEVO 915 Streetlight flywheel. The kit does not include new Flywheel bolts, Porsche do however recommend these are replaced at every removal.

Torque the Flywheel bolts to the original factory specification for your Flywheel bolt configuration. Six bolt flywheels (only) continue to use the unique 6 hole washer between the flywheel bolts and the flywheel.



**CLUTCH**

The AP Racing 215mm Clutch cover assembly and Clutch Disc are included in this kit. Spare parts can be purchased from Windrush, or through your local AP Racing agent (worldwide) using the same parts numbers.

Clutch Assembly, complete - CP3850-2ABLK

Friction Disc – CP3850-4

**INSTALLING THE RELEASE BEARING**

The AP Racing clutch is supplied with an adapter that allows the standard Porsche O.E. 915 Clutch Release Bearing (915 116 082 80) to be used with the AP Racing designed 215mm clutch.

**AP Racing adapter for the O.E. Porsche Clutch Release Bearing.**

The installation must be performed correctly and in the following sequence to avoid damage to the adapter and to ensure that the Clutch Release Bearing remains securely attached to the adapter during installation of the transmission onto the motor and during subsequent operation of the clutch.

Firstly the adapter must be mounted onto the O.E. Clutch Release Bearing. This is completed by a system that comprises of the square wire retaining ring – with small ears that protrude through the slot in the adapter, in conjunction with a Spiral Retaining ring that is installed last to prevent the square wire ring from becoming dislodged.

**Original shim placed onto the Porsche Clutch Release Bearing first**

The original thin shim must be placed on the bearing and the helical wave washer placed against that shim.

**Followed by the helical wave washer supplied with the adapter**

The retaining clip is positioned into the “open” position in the wide slot of the adapter.
Use a press, vise or clamps to position the bearing into the adapter until the bearing is fully seated. This will require little force, just enough to overcome the partial compression of the helical wave washer. Compress the helical wave washer until the square wire retaining ring is adjacent to the groove in the adapter.

**Retaining Clip in the “open” position**

Using pliers gently close the retaining clip – it will close approximately to the narrowest width of the fingers dividing the two positions of the slot in the adapter. The square wire ring will now be seating into the groove in the Clutch Release Bearing. Once the tabs on the square wire ring are pulled together enough to pass between the fingers, the pressure on the bearing can be relaxed slightly and the adapter will move away from the bearing until the groove in the Clutch Release Bearing is now adjacent to the narrower section of the gate.

**Retaining ring in compressed position so ears will pass between fingers.**

When the square wire retaining ring is in the relaxed and installed position, the ears on the ring may or may not appear to be fully seat in the narrow gate of the adapter. This is due to the tight tolerance of the components and the very small differences in circumferential length that control the final fit of the square wire ring.
Most critical is that the adapter and the bearing are co-axial with each other and the square wire ring is seated in the correct groove position of both the adapter and the Clutch Release Bearing. If the components are not quite correctly arranged it will be self evident when completing the final step.

**Retaining Clip shown latched into the closed position.**

The final step is the installation of the Spiral Retaining ring in the internal groove that is created between the end of the Clutch Release Bearing and the internal shoulder of the adapter.

**The internal groove for the Spiral ring is clearly visible between the adapter (closest to camera) and the Clutch Release Bearing.**

Wind the Spiral retaining ring into the internal groove. There is sufficient groove width that this will be very easy. If the groove is not parallel, or too narrow, then the arrangement of the adapter and the Clutch Release Bearing is not correct and should be rectified by investigating the correct seating of the square wire ring.

**Installing the Spiral retaining ring**

**Completed installation of the Spiral retaining ring**

The Release Bearing and adapter assembly can now be treated and mounted in the same way as when it was installed on the O.E. 915 Clutch cover. The bearing assembly should be installed in the same manner onto the AP Racing clutch diaphragm spring, using the O.E. fulcrum ring, spring washer and retaining ring.

There is a new retaining ring included with the adapter, this is a direct interchange with the O.E. retaining ring and either ring can be used to mount the bearing.

**MOUNTING THE CLUTCH**

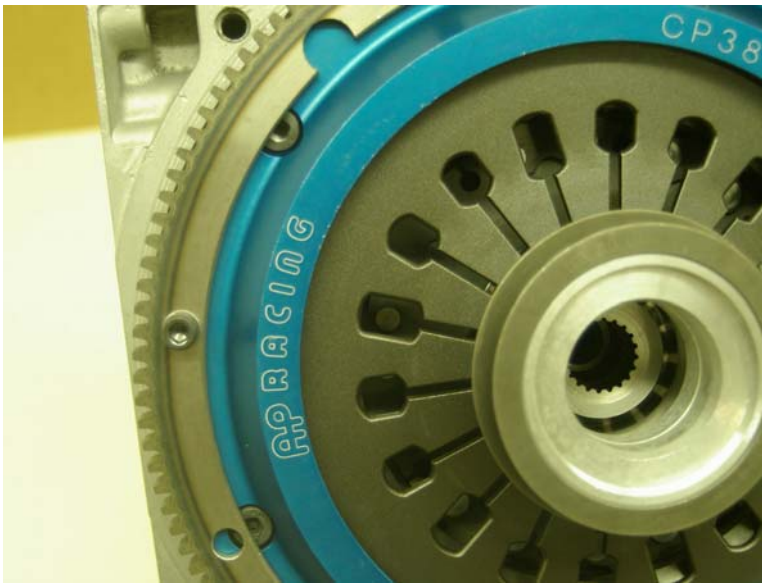
The clutch is fastened by six M8 x 30, 10.9 grade Low Head Cap Screws. These are tightened to 22 ft/lb of torque and we recommend also using high strength, hi temp thread lock.

The clutch cover and pressure plate are marked with yellow paint. This is the indexing of the parts that has been inspected and recorded by AP Racing during clutch manufacture. It is normal practice to keep the clutch assembled with these parts in the recorded position.

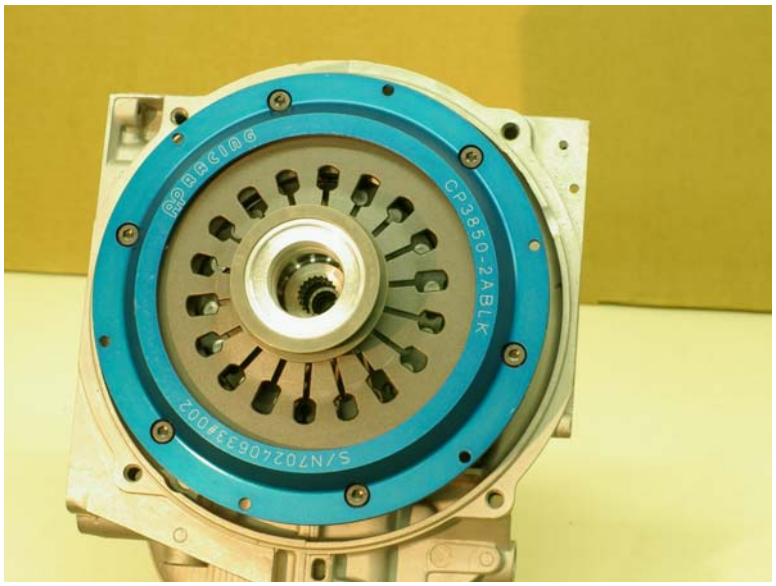
Be sure to keep the diaphragm spring correctly registered in the clutch cover and not titled, crooked or eccentric from the step feature that locates the diaphragm spring. Familiarize yourself with the parts before assembly to see how these parts must look when correctly assembled against the flywheel. This should be checked as the clutch cover bolts are tightened.

Use a pilot tool to align the clutch disc and pilot bearing.

It is normal practice to tighten these in a criss-cross pattern, slowly winching the clutch cover to the flywheel as the diaphragm spring is deflected. Keeping the clutch cover roughly parallel to the flywheel during this process is the objective.




Once the Low Head Cap Screws are tight, the screw heads should be sub-surface of the clutch cover, providing the flat surface where the Starter Ring Gear will locate.

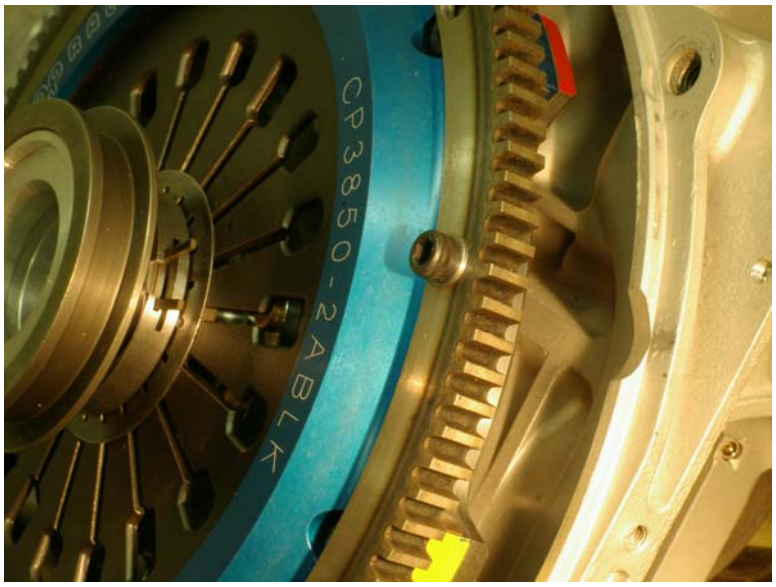



**MOUNTING THE STARTER RING GEAR**

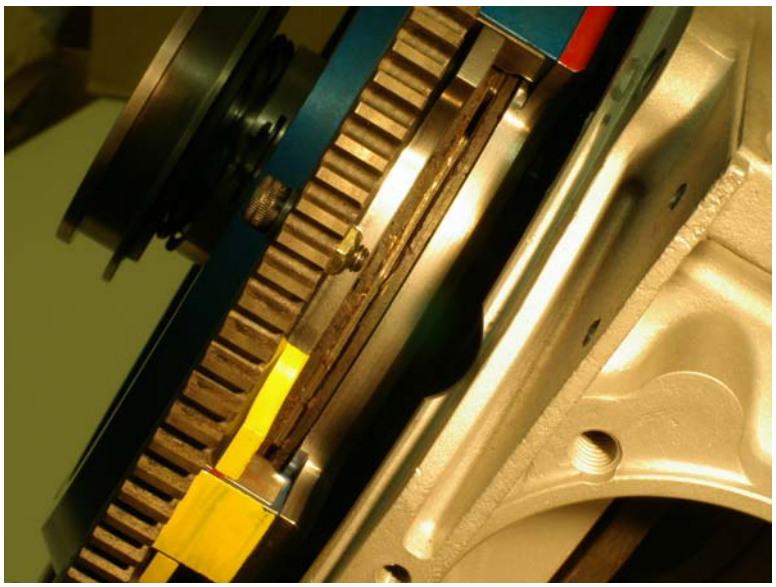
The O.E Starter Ring Gear is used in this kit (Part # 911 116 239 00)

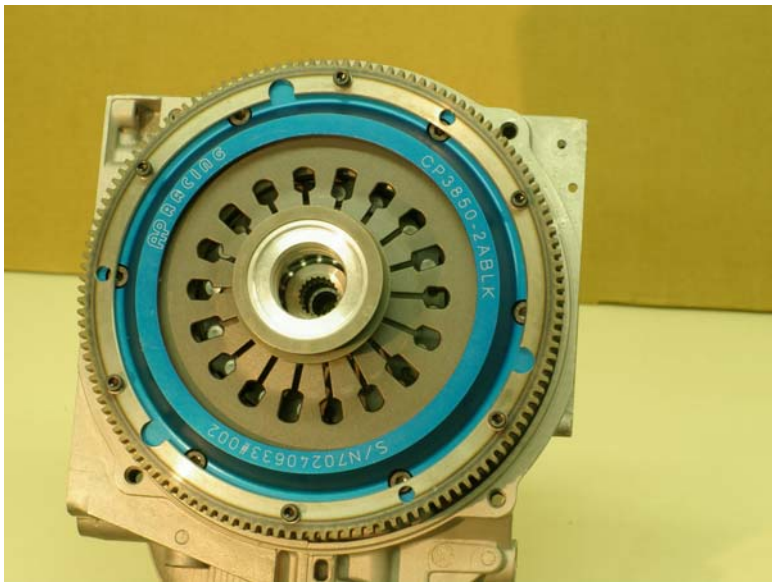
The Starter Ring Gear (SRG) is mounted with the step side facing the clutch cover and this step is a close tolerance fit over the outside diameter of the clutch cover. Ensure that all clutch friction material debris and corrosion is cleaned from the SRG before any attempt is made to fit the SRG over the clutch cover.

Six of the nine available holes in the SRG are used to fasten it to the clutch cover. The six fasteners are M6 x 18 Socket Head Cap Screws, each with a top hat bushing and all steel locking nut.




Identify the 6 holes in the SRG that match the 6 holes in the clutch cover and assemble these parts. The M6 screws should be torque'd to 11 ft/lb.





## PEDALS

The various pedal assemblies used from 1972 through 1986 RHD and LHD are all compatible with the WEVO 915 Streetlite system. There are a variety of different clutch shaft levers part numbers on these pedal assemblies – each of these has an impact on the motion ratio and pedal travel. The later model systems with the omega spring on the transmission will be the most sensitive to set-up.

In all cases make sure your pedal assembly is in good functional condition, so that any difficulties in adjusting the clutch for the feel and release position are not associated with poor pedal maintenance.

## ADJUSTMENT

The WEVO 915 Streetlite requires little adjustment.

After the initial installation, you will need to adjust the clutch cable to establish the correct release and engagement positions and cable free-play.

The WEVO 915 Streetlite is activated with a shorter pedal travel than the O.E. Sachs clutch.

As a result, you may find the clutch engagement and release area of the pedal travel is higher than previously.

Making adjustments to both the front end of the cable, where it attaches to the pedals – and the rear end of the cable where the mechanism is mounted on the transmission will allow the clutch engagement to be moved higher and lower in the arc of pedal travel.

Be sure to fasten all jam nuts once the desired outcome is achieved.

See below the importance of the clutch pedal stop to limit over-travel.

## CLUTCH PEDAL STOP

The clutch pedal stop device is important to prevent excessive over-travel of the clutch release mechanism. Over-travel could lead to deformation of the clutch diaphragm spring and reduced clutch performance.

All 911's equipped with the 915 transmission have a clutch pedal stop incorporated into the pedal floorboard. This adjustable stop needs to be in adjustable condition, including the rubber buffer – often missing (901 423 391 00), to be able to adequately adjust the pedal stop to suit the 915 Streetlite clutch kit.

If your car is modified and the floor board or the O.E. clutch pedal stop removed, we **HIGHLY** recommend an alternate clutch pedal stop mechanism be installed to limit travel at the pedal.

## MAINTENANCE

The WEVO 915 Streetlite does not require any unusual maintenance. Periodic adjustment as per the O.E. clutch is a good service practice.

## NOISE

The AP Racing 215mm clutch is a "lug drive" style clutch; there are six massive lugs that form the spokes of the clutch cover. The clamping ring is engaged with the lugs and this is what transfers the torque from the crankshaft to the transmission side face of the friction disc. The advantage of this architecture is the superb durability over "tab drive" clutches like the O.E. 915 Porsche clutch.

The disadvantage is noise – you will hear some rattling noise from the clutch, in neutral at idle. This will cease when the car is driven and the firing impulses of the crankshaft are smoothly reacted through the drive train.

In addition, some noise may be heard from the transmission, this is a function of the reduced clutch and flywheel mass acting as a torsional damper on the crankshaft. With the performance advantages of the lightweight clutch and flywheel assembly come some small penalty in NVH.

## CONTACT NUMBERS & DETAILS

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