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# PAT DOWNS

## Performance



**Highly Recommended:**  
Please read entire installation manual before installing your new Shockwave™ distributor.

# SHOCKWAVE™

## Ignition Systems

**Installation Manual**

# Shockwave™ Installation Manual



**Warning:** Before installing the Shockwave™ Distributor, please disconnect the negative battery cable.

## HOW TO CHANGE ADVANCE SPRINGS

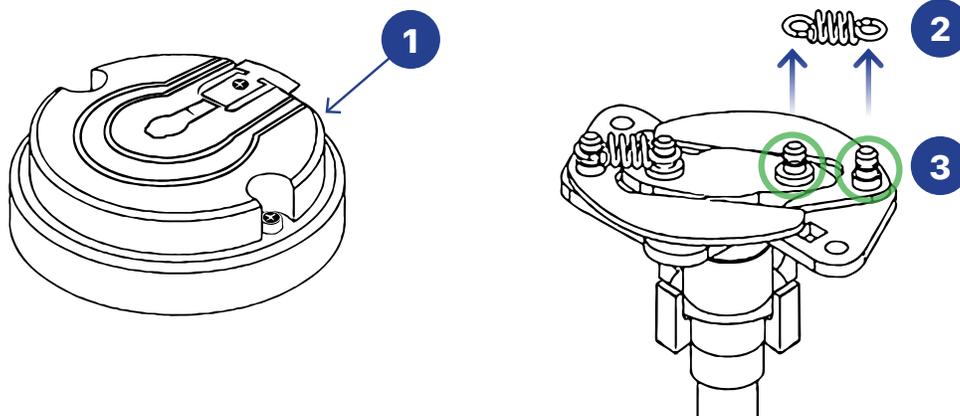
You can mix or match the springs for your advance rate. Your distributor has 3 sets of springs of which one set (Light Silver) is installed. The other 2 sets are in the parts kit and consist of a Heavy Silver Set and Blue set. The strongest to weakest spring ratings are as follows:

○ Strong Rate = Heavy Silver    ○ Medium Rate = Light Silver    ○ Light Rate = Blue



**Caution:** Use eye protective gear when changing advance springs.

1. Remove your distributor cap and rotor.
2. Carefully use needle-nose pliers to pull the spring and lift it off one of its posts. With one end of the spring off, the other end will now freely lift off its post.
3. Place desired spring on its inner post making sure it is seated in its receiver groove.  
With your needle-nose pliers pull spring over its outer post making sure to secure this end in its receiver groove.



Spring Combination	Rate of Advance	(NOTE: Advanced Rate RPM's are approximate.) * Verify with timing light
Heavy Silver + Heavy Silver	Slowest (@ ~5500 RPM)*	
Heavy Silver + Light Silver	(@ ~4600 RPM)*	
Heavy Silver + Blue	(@ ~4000 RPM)*	
Light Silver + Light Silver	(@ ~3200 RPM)*	
Light Silver + Blue	Fastest (@ ~2800 RPM)*	

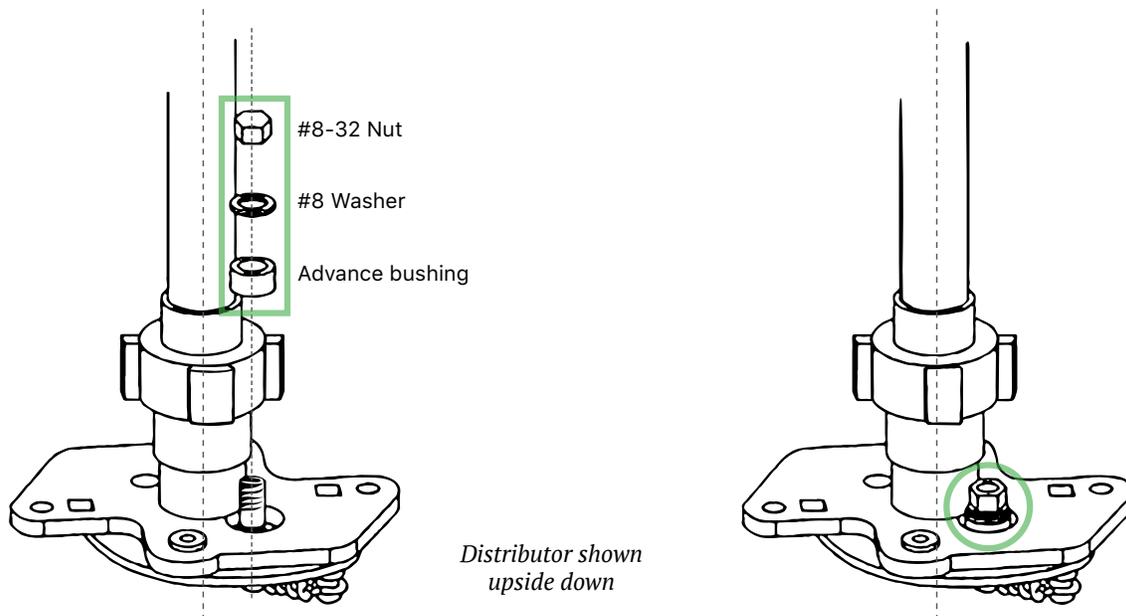
## HOW TO CHANGE THE ADVANCE STOP BUSHING

The advance stop bushings are of different outer diameters. The smaller the diameter, the more advance it allows. The advance bushings are also color coded for ease of identification. A 'Red' advance stop bushing is pre-installed in your distributor and the parts kit will have 3 additional bushings.

Bushing Color	Approx. Max. Advance in Crankshaft Degrees
Red (smallest)	30 degrees
Silver	25 degrees
Blue	20 degrees
Black (largest)	15 degrees

1. Remove your distributor cap.
2. Using a 9mm wrench remove the locknut and flat washer from the bottom of the mechanical advance plate.
3. Remove the bushing and install the desired bushing.
4. Re-install the washer and the locknut, making sure the locknut is tight.

**\* Note:** You may want to turn the distributor upside down to ease in the installation of the advance stop bushing if the distributor is removed from the vehicle.



Advance Stop Bushing Size	Approximate Crankshaft Degrees
Red (smallest)	30 degrees
Silver	25 degrees
Blue	20 degrees
Black (largest)	15 degrees

# HOW TO LOCK OUT MECHANICAL ADVANCE

If you do not want to have any centrifugal advance, you can lock it out by following this procedure with the distributor removed:



**Caution:** Use eye protective gear when changing advance springs.

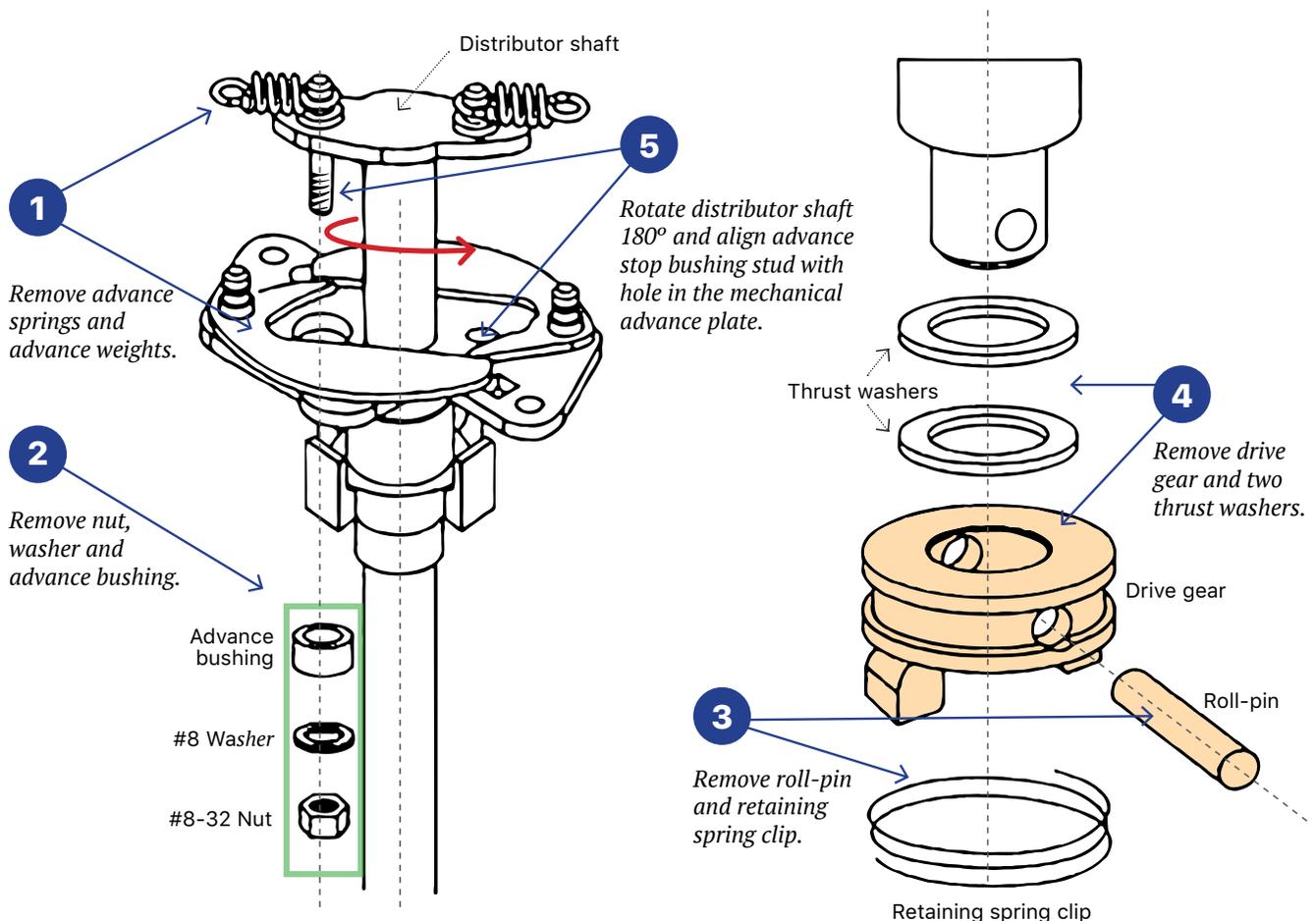
1. Remove advance springs and advance weights. (**\*NOTE:** After removal, advance springs and advance weights will no longer be used.)
2. Using 9mm wrench, remove nut, washer and advance bushing. (**\*NOTE:** After removal, advance bushing will no longer be used.)
3. Remove retaining spring clip and roll-pin.
4. Remove distributor gear and two thrust washers.
5. Push distributor shaft approximately 2 inches out of housing.

Rotate distributor shaft 180°.

Align advance stop bushing stud with hole in the mechanical advance plate. Push the distributor shaft back into the housing, making sure the advance stop bushing stud goes through the hole.

Re-install just the washer and locknut onto the advance stop bushing stud and make sure the locknut is tight.

Re-install distributor thrust washers, drive gear and roll pin. Make sure retaining spring clip is re-installed.



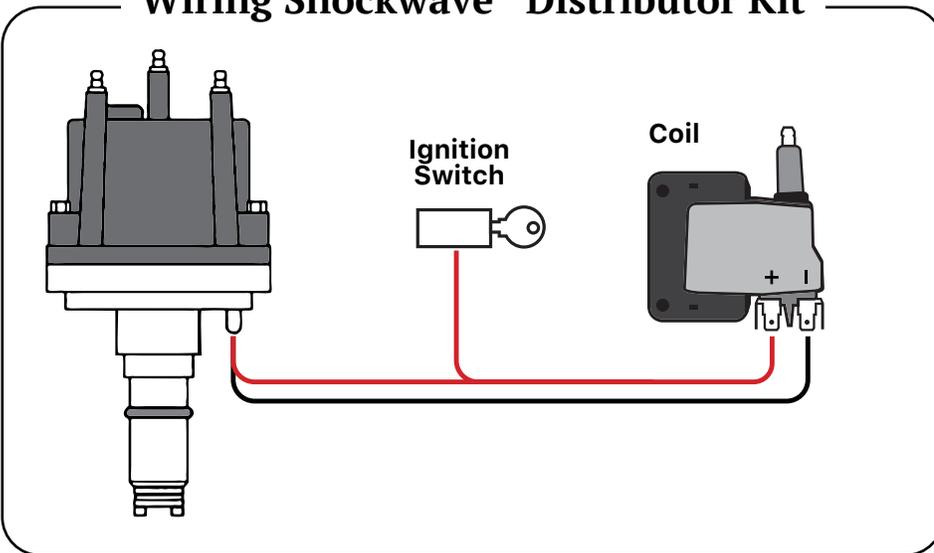
## DISTRIBUTOR AND SPARK PLUG WIRES INSTALLATION

1. Slide distributor clamp over shaft of distributor.
2. Install "O" ring on distributor.
3. With distributor cap removed, install the distributor making sure it is seated. Secure distributor clamp to engine case stud. Rotate the distributor so the rotor tip lines up with #1 terminal on cap. Tighten distributor clamp.
4. Install distributor cap and tighten securely.
5. Install spark plug wires, making sure firing order is correct. (\*see Fig. 1)
6. Connect Shockwave™ Distributor wire harness to ignition coil as shown in the diagrams below.
7. Start engine and set desired timing with timing light.

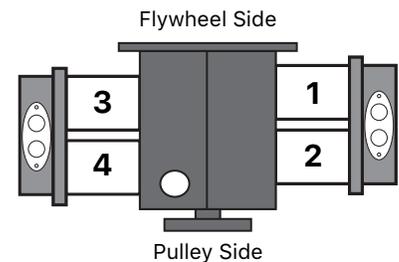


Attaching wires backwards on coil will result in immediate failure of Shockwave™ ignition module. Damage to Shockwave™ ignition module due to improper installation will void warranty. See warranty (page 4) for more details.

### Wiring Shockwave™ Distributor Kit

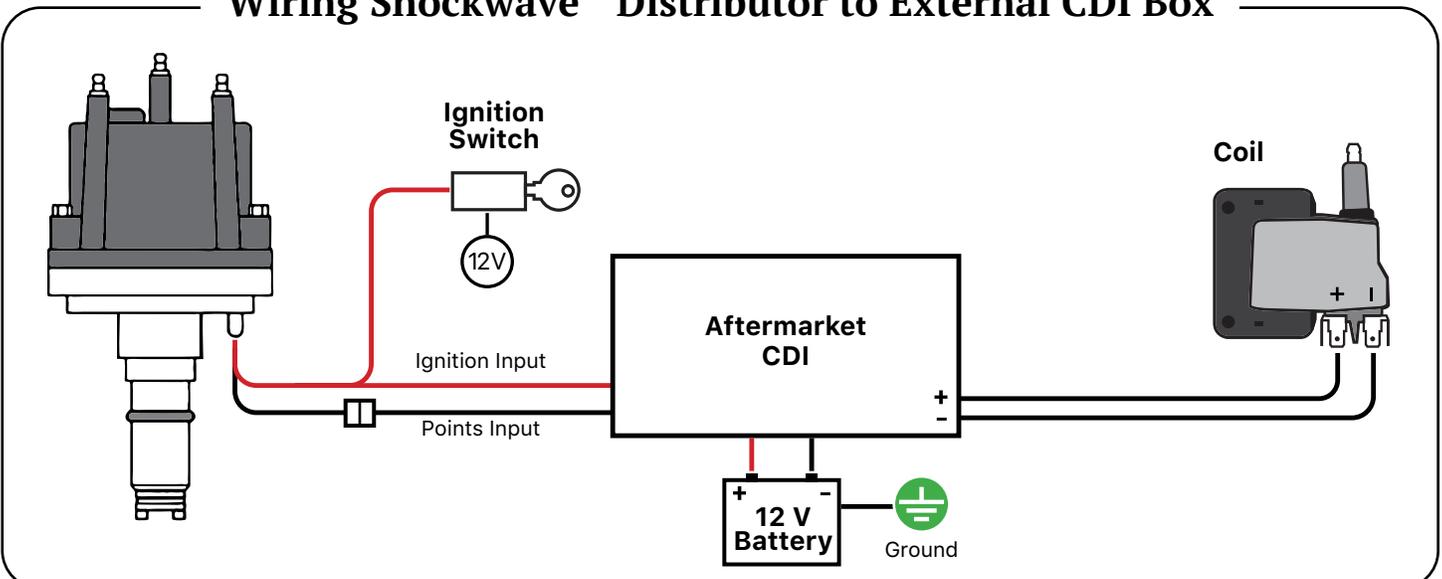


### Cylinder Firing Order #1, #4, #3, #2



(Fig. 1)

### Wiring Shockwave™ Distributor to External CDI Box



## **PAT DOWNS PERFORMANCE LIMITED WARRANTY**

Pat Downs Performance offers a limited 6 month warranty on Shockwave ignition systems and components. Ignition modules are limited to a 60 day warranty. Pat Downs Performance warrants to the original purchaser that the Shockwave ignition kit and or related parts are free from defects for a period of 6 months or 60 days for ignition modules. This warranty does not apply to products that have been altered in any way, A) improper installation B) subject to neglect such as water/dirt contamination. This limited warranty applies only to the original purchaser and is not transferable. In the event of a possible defect Pat Downs Performance responsibility is to repair or replace the defective part after returning the part for inspection. Warranty determination will be done by Pat Downs Performance only. Pat Downs Performance is not responsible for A) Labor incurred from alleged defects. B) Transportation or towing from alleged defects. C) Actual or alleged consequential or other damages incurred by the use of the Shockwave ignition systems or related parts.

### **Submitting A Warranty**

To submit a warranty, your Shockwave ignition product will need to be returned to the place of purchase. The original purchaser will need to call Pat Downs Performance to submit a warranty claim at (559) 804-0050. Shockwave ignition products must be returned prepaid by the original purchaser with a copy of the sales receipt. Ship products to:

**Pat Downs Performance**  
**6365 Ave 400**  
**Dinuba, CA 93618**

*Shockwave™ is a product of Pat Downs Performance Inc., 6365 Ave 400, Dinuba, CA 93618*

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