

# **MSD** **IGNITION** **INSTALLATION INFORMATION**

## MSD SPRINT CAR CRANK TRIGGER PARTS AND ACCESSORIES PN 7971, 7980, 7981, 7975, 7976 and PN 7977

**Note:** Before beginning the installation, please check the package contents and verify that the following parts are included:

### Water Pump Assembly, Small PN 7980, Large PN 7981 – Parts List

- |   |                                 |
|---|---------------------------------|
| 1 - Water Pump                          | 1 - Parts Bag                   |
| 1 - Stainless Steel Drive Hub           | 1 - Hytrel Coupling Spider      |
| 1 - Pickup Slider Assembly              | 1 - Worm Drive Clamp            |
| 1 - 3/8-24 Non Magnetic Pickup, PN 8159 | 4 - 5/16-24 x 2.25 SH Cap Screw |
| 1 - Aluminum Pickup Slider              | 4 - 5/16 AN-960C Flat Washer    |
| 1 - Lexan Timing Window                 |                                 |
| 1 - 3/8-24 SS Jam Nut                   |                                 |

### Front Cover Assembly, PN 7971 – Parts List

- |                                  |                               |
|----------------------------------|-------------------------------|
| 1 - Aluminum 1 Piece Front Cover |                               |
| 1 - Parts Bag                    |                               |
| 2 - .250 x .625 Dowel Pins       | 1 - 10-32 Flex-Loc Nut        |
| 1 - Oil Seal, Nat#742164V        | 1 - #10 Belleville Washer     |
| 3 - 10-32x.250 Button Head Screw | 10 - 1/4-20x1.75 SH Cap Screw |
| 1 - Timing Pointer               | 10 - 1/4 AN-960C Flat Washer  |
| 2 - 1/4-28x1.25 SH Cap Screw     |                               |

Note: For Titanium Fastener Kit, Order PN 7994 – Titanium Bolt Kit

### Crankshaft Hub: Aluminum Non-Trigger, PN 7977 – Parts List

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|------------------------|---------------|
| 1 - Aluminum Crank Hub | 1 - Parts Bag |
|------------------------|---------------|

### Crankshaft Hub: Stainless Steel Trigger-Type, PN 7975 – Parts List

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|---------------------------------|---------------|
| 1 - Stainless Steel Trigger Hub | 1 - Parts Bag |
|---------------------------------|---------------|

### Crankshaft Hub: Titanium Trigger-Type, PN 7976 – Parts List

- |                          |               |
|--------------------------|---------------|
| 1 - Titanium Trigger Hub | 1 - Parts Bag |
|--------------------------|---------------|

In the event that any parts are missing, please contact the MSD Pro Mag Department via mail or telephone at :

MSD Ignition  
1490 Henry Brennan Drive  
El Paso, Texas 79936  
Phone: 915-857-5200  
Fax: 915-857-3344

To ensure a reliable and trouble free installation, please review the following tips and recommendations:

- The bore of the trigger wheel MUST be honed to produce a 0.001-0.002" press fit on the crankshaft snout. Every crank will be different, so check the dimensions carefully before beginning the process.
- If precise timing marks are desired, it is advisable to set the adjustable timing pointer during engine assembly when a positive piston stop can be utilized.
- The 0.250 x 7/8 dowel pins are supplied for use with Aluminum blocks only!! Cast iron blocks require 0.248 diameter pins. Please note that most gear drives are supplied with the correct pins and the ones in the MSD kit may not be needed.
- Silicone sealant (or equivalent) must be applied to the front cover sealing surfaces, as well as the front cover bolts, to prevent oil leaks and seepage.
- Install the three seal retention screws with Blue Loc-Tite or an equivalent thread locking compound. Heating the small screws with a soldering iron will allow for easier removal should it be necessary.
- Some engine cleaners and solvents will damage (cloud) the timing window. Avoid spraying them directly on the window.
- Mock up the entire water pump assembly before the final installation (i.e. BEFORE PRESSING ON THE TRIGGER WHEEL). Begin by stacking the coupling spider and the trigger wheel in the water pump drive. Install the pickup and slider bracket and snug the retention clamp. Adjust the air gap between the trigger wheel and the pickup until it is approximately .030". This is an APPROXIMATE distance and may need to be altered slightly. As a rule of thumb, run the largest air gap that will still allow the engine to start reliably. Once the optimum air gap has been established, measure and record the distance between the signal end of the pickup and the back of the slider bracket. In the event that the pickup and/or slider must be changed, this reference dimension can be used to adjust the air gap quickly and accurately.
- This kit *requires the user to supply* a 7/16 – 20 Grade 8 or quality after market bolt to retain the trigger wheel. The length of the bolt will depend entirely upon the crankshaft design and manufacturer. Note that the bolt head cannot extend beyond the coupling spider. Torque the bolt to 65 ft-lb.
- Depending on the desired water pump fitting orientation, it may be necessary to remove the housing in order to install two of the assembly mounting bolts and washers.











