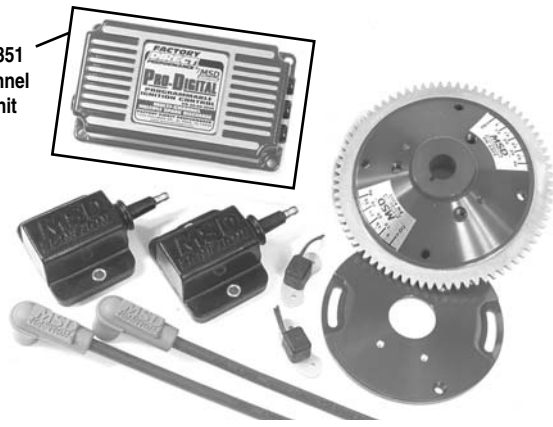


# MSD POWERSPORTS

\*Part # 42351  
Multi Channel  
Ignition Unit  
Only



## MULTI-CHANNEL RACING IGNITION SYSTEMS

Precise ignition timing is essential to produce maximum horsepower. However, one timing setting is not ideal for an engine's entire rpm range. The dynamics of air and fuel flow into the engine as well as the speed that the piston travels through the combustion stroke all affect the ideal timing setting. Fortunately, the Programmable MSD Ignition lets you tune in a custom timing curve to match your engine's requirements.

There are three settings that you program to create a timing curve. First you set where you want the initial timing, or idle timing. Next you set the rpm

point to begin the curve, followed by the amount you want it to retard (up to 30°) through the high rpm limit. All the adjustments are made with dip switches built into the ignition.

This Ignition delivers a powerful capacitive discharge spark from idle to top end. This improved output results in complete combustion for performance through the entire rpm range of your engine.

Kit Part No.	Description	Ignition Unit	Trigger Plates	Trigger(s)	Coil (w/Bracket)	Wire Set	Flywheel/Magnet Wheels
42380	Yamaha 650/701/760 Total Loss	42351	4311	(2) 4316	(2) 42921	31009	43032

\*42351 Multi Channel Ignition Unit only (Replacement Ignition Kit)

### 1-REV CONTROL

The MSD's adjustable rev limiter allows you to program an rpm limit that the engine will not rev past. This is a great feature that will save your engine from over rev damage caused by parts failure or if the craft's drive mechanism comes out of the water. When your limit is reached, the ignitions adjusts the spark output quickly to stay below the rpm. This produces a smooth rev limiting action.

### 2-HOLESHOT

Thanks to the rev limiting circuit of the Ignition, MSD engineers developed a feature that will give you great holeshots. By installing a handlebar operated switch, you can activate a lower rpm limit that will hold an engine under 3,000 rpm. This way you can hold the throttle wide open and concentrate on the rubberband snapping. When it does, you release the button, the engine revs to full power and you launch out in front! (See page 107. Hole shot control switch)

### 3-EASY STARTS

When you increase the compression ratio of your engine, it also puts more pressure on your starter to crank the engine over. The MSD Programmable Ignition has two features that can help ease cranking pressure and improve the start up of our watercraft.

**Retard:** When activated, this feature retards the timing 20° to ease cranking. When the engine starts, the timing returns to the initial setting.

**Delay for Electric Starters:** When activated, this mode will not produce a spark for the first several rotations of the engine. This helps build momentum in the engine, resulting in easier starting.

# MSD POWERSPORTS



One of the advantages of the MSD Multi-Channel Ignition system is the individual trigger pickups for each cylinder. This way you can make up for the variations in fuel flow dynamics to each cylinder, exhaust characteristics or carb synchronization by altering the timing of each cylinder,

## MSD TRIGGER PICKUP PLATE

Description	Part No.
Yamaha 650/701/760	4311
Yamaha 1200 Powervalve	43115
Kawasaki 650/750	43122

# MSD POWERSPORTS



## MSD TOTAL LOSS PICK UP

Description	Part No.
Pick Up Total Loss Universal	4316
Pick Up Yamaha 800/1100/1200	43161
Pick Up Shim Kit	M4318
Timing Tape, Sea Doo	LAB17344
Timing Tape, Yamaha 1200/800	LAB19722
Magnets, Round 2 pcs/set	4309

FOUR STROKE	INTAKE SYSTEMS	ENGINE/GASKETS	EXHAUST	DRIVE LINE HANDLING	ELECTRICAL	WATERLINE /BILGE	STEERING & CONTROLS	BODY	ACCESSORIES	SERVICE TOOLS /HARDWARE	CHEMICAL
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# MSD™ POWERSPORTS



## MSD COILS

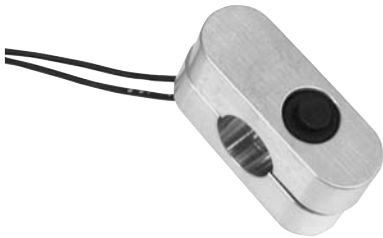
Description	Part No.
A. Single Tower Pro Coil	42921
B. Stock Improved Coil for start-up	4294



## Mini Stripper-Crimper

Designed to be in a vise and with a single-edge razor blade to strip spark plug wires without damaging the core and to crimp a terminal. Inexpensive too!

Description	Part No.
Mini Stripper-Crimper	3503



## HOLESHOT CONTROL SWITCH

This is a momentary push-button switch encased in a CNC machined aluminum housing that clamps around the handle bar. It comes with a 6-foot wire harness that should reach almost anywhere on your watercraft. Use this switch to activate any MSD feature.

Description	Part No.
Holeshot Control Switch	4372



## 8.5MM SUPER CONDUCTOR SPARK PLUG WIRE

Spark plug wires have two main objectives; transfer the spark energy and suppress the Electro Magnetic interference (EMI) that the spark voltage creates. The MSD 8.5mm Super conductor delivers the best of both worlds. MSD uses a special copper conductor keeping resistance under 50 ohms per foot! Even with this low resistance, the wire retains high EMI suppression capabilities. By wrapping the conductor tightly around a ferro-magnetic impregnated center core and EMI choke is created, keeping any interference inside the wire.

Description	Part No.
Two Cylinder Wire Set	31009
One Cylinder Wire Set	31019
Three Cylinder Wire Set	31039
Bulk Wire 25 feet - Red	34019
Bulk Wire 25 feet - Black	34013



## MSD SPARK PLUG BOOT RETAINERS

There's no excuse for losing a race due to a plug wire popping off when you run MSD's Boot Retainers. These handy clamps are molded from heat resistant nylon material and will lock the boot to the spark plug.

Description	Part No.
A. Boot Retainer, 90° Spark Plug Boots & Terminal	3340
B. 90° Spark Plug Boots & Terminal Only (2 pcs.)	3311



## DUAL WIRE SEPARATORS

These handy separators will secure two wires and keep them away from the exhaust or moving parts. Each wire can be moved easily and clipped right back in! Sold in a pack of 16.

Description	Part No.
Dual Wire Separator (pack of 16)	8841

Each Enhancer is a direct plug in unit and is designed to fit in the stock location. The Enhancer Ignition gives the racer an edge due to the powerful spark energy and adjustable rev-limiter. The Enhancer Ignitions produce a much more powerful spark, as much as four times more spark energy, to insure complete combustion of the fuel mixture. This complete combustion results in improved performance including quick throttle response, improved pulling power and top end, plus will reduce spark plug fouling. Whether your watercraft is stock or if you've added other modifications such as a better flowing intake or exhaust modifications, the Enhance ignitions will improve the performance.



4253

### YAMAHA 650/701 ENHANCER

At lower rpm you'll notice incredible acceleration and throttle response due to advancing the timing. Then as the rpm increases, the timing is retarded to the factory setting to prevent detonation and engine damage. For racers, there is also a lower rpm limit that you can activate for quick and consistent holeshots. By activating a switch (Part# 4372 see page 144) mounted on the handle bar the rpm will limit at approximately 3,000 rpm. The instant the button is released, the rpm revs up just as normal and you rocket off. Everything you need to install the Yamaha Enhancer is supplied along with factory connectors for a direct plug-in installation!

*Not compatible with Yamaha 760 engine applications.*

Description	Part No.
Yamaha 650/701	4253



4251

### KAWASAKI 750 ENHANCER

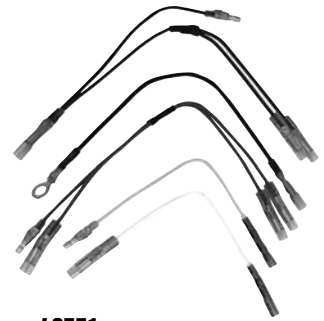
The Kawasaki 750 Enhancer features the increased spark energy you expect from MSD plus they have an adjustable rev limiter and holeshot rpm limit. The rev limit is adjusted with a potential on the back of the ignition housing. The holeshot feature lets you activate a lower rpm limit that is best to use for quick starts at the beginning of a race. Also, these ignitions can be connected to the factory overheat sensor. With this feature, if the water temperature gets too high, the Enhancer will limit the rpm to a safe value to avoid any engine damage.

Note: Enhancer will not work on 1996Zxi.

Description	Part No.
Kawasaki 750 SX/SXi/95ZXI	4251



4255



42551

### SEA-DOO 800 ENHANCER

The Enhance Ignition for the Sea Doo® 800 (also the '95, '96, XP and GSX) uses a high speed RISC microprocessor to control all of the timer and rev limiter functions. This opens the door for programming, giving you the ability to set two rev limits and a timing curve through a series of dip switches built into the Enhancer. Being able to control the ignition curve lets you match the timing specifically to your engine and its modifications. The Digital Enhancer produces a series of sparks through 3,000 rpm rather than just a single spark. This feature delivers incredible throttle response, acceleration and keeps the idle clean and smooth. Note: This modification will eliminate the factory DSS security system and the handlebar kill feature.

Description	Part No.
Sea Doo 800 '95-96	4255
Sea Doo 800 '97-98 SPX, GTX Harness Only	42551



### MSD EXTERNAL STARTER RELAY

This 12 volt relay is a heavy duty unit designed to mount outside the electrical box. It's made with material that locks out moisture and chemicals. The large copper terminals assure good solid contact with your wiring. The stainless steel base plate allows the relay to be mounted in any position. Rated at 65 amps.

Description	Part No.
MSD External Starter Relay	M4390



### TIMING ADVANCE PLATE

The timing advance plate is recommended for all Kawasaki 750 engines running the Enhancer Ignition. This plate advances the timing 7° for a boost in low to mid range performance. Note: If you are running excessive compression or low octane fuel it is recommended that you run the retard module listed. Must be used with PN 4251 on SXi, XiR, and ZXi.

Description	Part No.
Timing Advance Plate for Kawasaki	4332

FOUR STROKE  
INTAKE SYSTEMS  
ENGINE/GASKETS  
EXHAUST  
DRIVE LINE HANDLING  
ELECTRICAL  
WATERLINE /BILGE  
STEERING & CONTROLS  
BODY  
ACCESSORIES  
SERVICE TOOLS /HARDWARE  
CHEMICAL

**Grey Deutsch**



**Weathertight**

**MSD WEATHERTIGHT & DEUTSCH CONNECTORS**

Description	Part No.
Weathertight 6 pin connectors	8170
Weathertight 4 pin connectors	8171
Weathertight 3 pin connectors	8172
Weathertight 2 pin connectors	8173
Grey Deutsch 8 pin connectors	8185
Grey Deutsch 6 pin connectors	8180
Grey Deutsch 4 pin connectors	8181
Grey Deutsch 2 pin connectors	8183



**PERMA-SEAL CONNECTION KIT**

Maximum ignition reliability can only be obtained by using high quality connectors and the Perma-Seal Connector Kit fits the bill! The tin coated copper terminals prevent corrosion and increase the connector's strength. To seal the connection, each connector has a special heat shrinkable outer sleeve that bonds and seals to the wire when heat is applied to it.

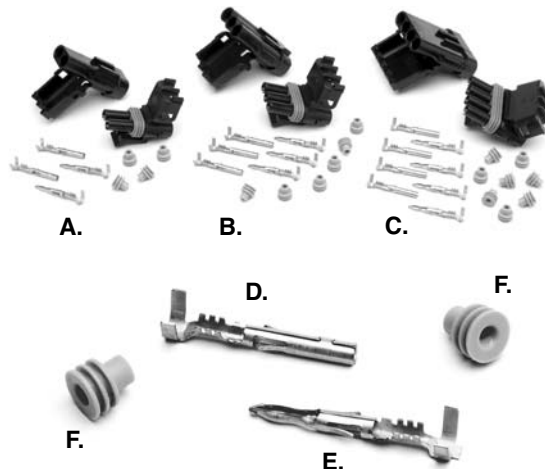
Description	Part No.
MSD Perma-Seal Connector Kit	4377



**PRO-CRIMP TOOL**

To do a job right, it is important to have the right tools. If you custom build a lot of plug wires, the Pro-Crimp is the right tool for you! The Pro-Crimp features a hardened steel frame, molded hand grips and built-in ratchet action that is also adjustable. The tool is supplied with jaws to fit MSD's Super Conductor Spark Plug wires and can be removed to use additional jaws (not supplied) for crimping common wiring terminals.

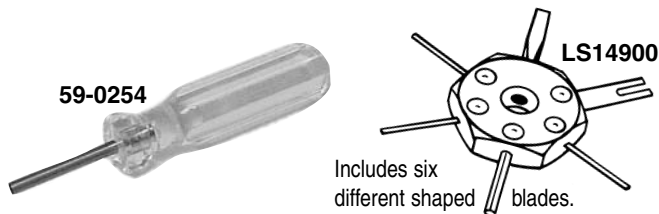
Description	Part No.
MSD Pro-Crimp Tool	3505
Spark Plug Dies	3508
Amp Pins	3506
Amp Lug Dies	3507
Weathertight Dies	3509
Deutsch Terminal Dies	3510



**HOT PRODUCTS WEATHER PACK CONNECTORS**

Ideal for use in harsh environments. Positive snap-action locking. Secondary locking helps terminal retention and provides access to the terminals for service.

Description	Part No.
A. 2 Way Housing Kit	55-2060
B. 3 Way Housing Kit	55-2061
C. 4 Way Housing Kit	55-2062
D. Female Terminal Only 100 pcs/pk	55-2070
E. Male Terminal Only 100 pcs/pk	55-2071
F. Cavity Seals Only 100 pcs.	55-2072



**TERMINAL DETENT TOOL**

The hollow barrel allows you to depress the tab on the terminal end and to remove the wire from the connector without damaging its ends.

Description	Part No.
Terminal Detent Tool	59-0254
Terminal Removal Tool	LS14900



**MSD TIMING LIGHT**

MSD offers a heavy duty top quality timing light. This timing light is supplied in a heavy duty metal housing and features a high output Linear Xenon strobe with a focused fresnel lens that produces a light that's bright enough to use outdoors. It is equipped with a 6 foot lead and uses a metal inductive pickup that clamps to the spark plug wire.

Description	Part No.
MSD Timing Light	8990



## WATERPROOF TERMINAL KIT

Japanese OEM type connector Kit.

Description	Part No.
2-Pin Terminal Kit	55-2050
3-Pin Terminal Kit	55-2051
4-Pin Terminal Kit	55-2052



## JAPANESE OEM STYLE CONNECTOR

Description	Part No.
OEM Style Electric Connector Kit 5pcs/pk	55-2035
Dealer Kit 20pcs/pk	55-2037



## MALE/FEMALE TERMINAL KIT

This kit includes 30 of both the male and female terminals and plastic sleeves/covers. The terminals are tin plated to prevent corrosion. The terminal kit is provided in a handy plastic case.

Description	Part No.
Male/Female Terminal Kit	16-601



## IGNITION SYSTEM SPARK TESTER

This ignition system tester checks the integrity and strength of your system by gauging your systems spark.

Description	Part No.
Ignition System Spark Tester	59-0253



## ADHESIVE LINED HEAT SHRINK BUTT CONNECTORS

Best used where moisture and corrosion is a problem. After crimping these terminals to wire, heat is applied enabling the adhesive within each shrunk tube terminal to melt and flow evenly to seal the connection against the harshest environment.

Description	Wire Range	Part No.
10pcs/pk Pink	22-18 (0.3-0.8mm)	55-2040
100pcs/pk Pink	22-18 (0.3-0.8mm)	55-2041
10pcs/pk Blue	16-14 (1-2mm)	55-2042
100pcs/pk Blue	16-14 (1-2mm)	55-2043



## MICRO TOUCH MICROPROCESSOR BASED IGNITION CONTROLLERS FOR SEA DOO

Features Include:

- 25% More Spark Energy
- 4 Rev Limits from 7500 to 8250 RPM
- 4 Timing Curves
- Initial Timing Correction Adjustment
- 4 Timing Retard Rates
- On-board Output Water Injection Controller
- Compatible with OEM Throttle Position sensor

Description	Part No.
785-951 RAVE w/Single Coil 96-98	MT-IGN-REV96-98

## MICRO TOUCH REV-LIMITER FOR SEA DOO

Description	Part No.
785 RAVE 96 2Rev (7500&7900rpm)	MT-REV-SDRAVE96



MT-DUAL-2

## MICRO TOUCH DUAL OUTPUT WATER CONTROLLER FOR 2-CYLINDER WATERCRAFT

For injecting water into **pipe** and **waterbox** (or **stinger**) independently. Improve acceleration. Additional exhaust back pressure can increase top end power without sacrificing bottom end.

Features Include:

- Adjustable Output for 2 Water Injection Solenoid —
  - #1: 4 **ON** Settings from 1,500 to 3,000 RPM;
  - 16 **OFF** settings from 4,000 to 7,000 RPM.
  - #2: 4 **ON** Settings from 5,000 to 7,000 RPM, **OFF** at 10,000.
- Senses Engine RPM from Spark Plug Wire

Description	Part No.
Dual Output Water Controller	MT-DUAL-2

FOUR  
STROKE

INTAKE  
SYSTEMS

ENGINE/  
GASKETS

EXHAUST

DRIVE LINE  
HANDLING

ELECTRICAL

WATERLINE  
/BLIGE

STEERING  
& CONTROLS

BODY

ACCESSORIES  
/HARDWARE

SERVICE TOOLS

CHEMICAL



## POWERSHOT ADJUSTABLE FUEL TUNER



The all new R&D Powershot fuel injection tuner will deliver increased horsepower, acceleration, and stronger mid-range performance by delivering a higher performing air to fuel ratio (A.F.R.) to the engine. Many of today's high performance fuel injected four stroke muscle craft have a conservative A.R.R., which allows manufacturers to meet C.A.R.B.'s O.E.M emission standards and regulations. R&D Performance has tested, documented, and analyzed the O.E.M. fuel map or curve, on every current fuel injected four stroke watercraft. The pre-programmed and coded R&D Powershot fuel injection control module safely alters the O.E.M. fuel map to a higher performing and safer A.F.R. (richer). More horsepower, greater acceleration and stronger mid-range are the result when the proper A.F.R. is achieved and is tuned for optimum performance. The R&D Powershot is pre-coded, pre-tuned, preset and ready to install easily in minutes with R&D's comprehensive installation and tuning instruction.

The R&D Powershot is fully adjustable on the fly (with the engine running, observed and tuned while riding), and will accommodate a wide range of adjustability to properly performance tune the A.F.R. for any combination of aftermarket parts, i.e. aftermarket supercharger modifications, camshafts or valve train modifications, head modifications, exhaust system modifications, and high compression piston kits. The R&D Powershot will add horsepower, reliability, and adjustability to any electronic fuel injected two or four stroke watercraft engine.

R&D has a Powershot unit for virtually every watercraft application! Available for all two and four stroke fuel injected Sea-Doo, Yamaha, Kawasaki and Honda Watercraft. The R&D Powershot is a must have part on supercharged Sea-Doo's using Vortech high boost compressor wheels, and Kawasaki 15Fs with offshore kits!

### Description

### Part No.

KAW 12F/15F Powershot Fuel Tuner	<b>801-15000</b>
KAW Ultra 250X/250LX Powershot Fuel Tuner	<b>801-25000</b>
YAM VX110 Powershot Fuel Tuner	<b>802-00110</b>
YAM FX H.O. Powershot Fuel Tuner	<b>802-16000</b>
YAM FX SHO/FZR/FZS Powershot Fuel Tuner	<b>802-18000</b>
YAM GP 1300R Powershot Fuel Tuner	<b>802-13001</b>
S-D GTX/GTI 4-TEC N.A. Powershot Fuel Tuner	<b>803-95000</b>
S-D GTX 4-TEC SC (185 HP) Powershot Fuel Tuner	<b>803-95001</b>
S-D RXP/RXT/GTX 4-TEC (215 HP) Powershot Fuel Tuner	<b>803-95002</b>
S-D RXP-X/RXT-X (255HP) Powershot Fuel Tuner	<b>803-95003</b>
Hydrospace Powershot Fuel Tuner	<b>806-10000</b>



## IGNI-PRO PROGRAMMABLE IGNITION 800 SX-R

Igni-Pro Programmable Ignition 800 SX-R (all years) - Best is getting better! NEW UPDATED, ignition does not require power when the engine is not running eliminating the battery draw down in the past units. 2008 Igni-Pro is a high power ignition only for racing, which can be adjusted fully online with your PC at home or with Laptop directly on the water. (USB). This allows you to react at changes at your Kawasaki SX-R 800 configuration. The conversion from the OEM ignition system to Igni-Pro is very simple. Programming software is supplied for Windows 2000 and XP. Operates as a total loss system on all Superstock and GP engines. The unit fits perfectly in the OEM Kawasaki sealed ignition box protecting the unit from possible water damage!

### Description

Igni-Pro Programmable Ignition 800 SX-R

### Part No.

**IGNI800SXR**

## RIVA PRO-SERIES E.F.I. CONTROL UNIT

If you plan to modify your Yamaha GP1300R our Pro-Series EFI Control Unit is a must. This easy-to-use control unit plugs directly into the OEM wiring harness between the ignition and fuel injection system providing control of the engines fuel management system. Key benefits include:

- Allows addition of fuel required with engine modifications without upsetting stock fuel map.
- Integrated dials provide easy adjustment and fine-tuning of fuel delivery curve without external programming devices.
- LED lights indicate fuel delivery settings while tuning.
- Won't interfere with craft's stock sensors and inputs.



### Yamaha

Control Unit, EFI GP1300R (60T), Plug-in

### Part No.

**RY11913**

# JETINETICS

The Science of Racing



**J305**



**J315 - Outside of Flywheel**



**J315 - Inside of Flywheel**

## JETINETICS CHARGING FLYWHEEL

Jetinetics is the originator of the charging aluminum flywheel, and proudly retains the manufacturing right to its patented design. The patented Jetinetics Charging Flywheel is significantly lighter, 50% in some cases, which greatly reduces the energy used to overcome flywheel mass and allow the engine to increase rpms rapidly. A significant benefit is the fact that the engine will produce horsepower only after it has reached its powerband, which usually begins about 3800 rpm. By using a Jetinetics Charging Flywheel, the engine is able to reach its powerband much more quickly and create usable power much sooner. Further, during rapid cornering such as course racing or slalom runs, this becomes a significant factor for acceleration.

- CAD/CAM Designed and Dyno Tested • All Billet Aluminum Construction • 40% to 60% Lighter than Stock
- Manufactured by Jetinetics on our Own CNC Machinery • Deep Purple Anodized Finish All Over
- Precision Dynamically Balanced • Sealed/Invisible Embedded Magnets (Can Never Come Loose or Rust)
- Tuff Heat Treated Alloy Ring Gear, Heat Treated to 65 Rockwell C • Accepts Factory Puller for Removal
- Ring Gear Teeth Chamfered for Better Starter Bendix Engagement • Each Flywheel is Coded and Serialized
- 400 Times More Corrosion Resistant than Double Hard Chrome • Most Models Can be Repaired or Rebuilt if Necessary
- Some Models Utilize Steel Center Hubs to Prevent Bore Failures/Extend Flywheel and Crankshaft Life
- No Modifications Needed to Install (Just Standard Tools Needed)

Description	Part No.	Description	Part No.
Kawasaki 750/800	<b>J305</b>	Yamaha 701 (62T/64X)	<b>J315</b>



## MACC RACING KAWASAKI ULTRA 250X TIMING ADVANCE COVER

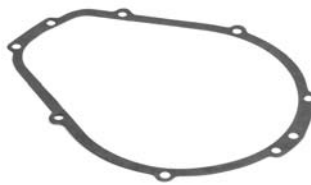
Macc Racing and Speed Magic have developed this billet timing advance cover to allow the timing to be advanced up to 6 degrees on the Ultra 250X.

Description	Part No.
Macc Racing Ultra 250X Timing Advance Cover	<b>MR-0085</b>



FEDERICO BUFACCHI  
FREERIDE WORLD CHAMPION

FOUR STROKE	INTAKE SYSTEMS	ENGINE/ GASKETS	EXHAUST	DRIVE LINE HANDLING	ELECTRICAL	WATERLINE /BILGE	STEERING & CONTROLS	BODY	ACCESSORIES	SERVICE TOOLS /HARDWARE	CHEMICAL
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## FLYWHEEL COVER & HOUSING GASKETS, O-RINGS & OIL SEALS

FOUR STROKE

### FLYWHEEL PULLER

Sea Doo	Part No.
800/951 38mm x 1.5	MP#42
Kawasaki	Part No.
900/1100 35mm x 1.5	DS#29

Yamaha	Part No.
580/650/Pre 94 701	DS#37
12 Hole Disc 8mm Bolts	
701/760/800/1100/1200	DS#37
12 Hole Disc 8mm Bolts	

Sea Doo	OEM#	Part No.
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Flywheel Cover O-Rings		
580 (88-91)	290-950-130	6280
580/650/720 (92-98)	290-831-555	6278
800 (95-99)	420-950-360	6632
950 (98-99)	290-931-690	6795

INTAKE SYSTEMS

### MAGNETO FLYWHEEL PULLER

Sea Doo	Part No.
580/650/720	DS#34
3 Hole Disc 8mm Bolts	

Kawasaki	Part No.
300/440/550/650	DS#37
12 Hole Disc 8mm Bolts	
750/800	MP#18
Special 18mm x 1.5 Right Hand Bolt	

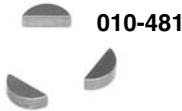
Flywheel Housing Gaskets		
580/650/720	290-850-605	6130
800	290-931-470	6045

ENGINE/GASKETS

Polaris	Part No.
Polaris All & Universal	DS#37
Universal 12 Hole Disc 8mm Bolts	

Yamaha	OEM#	Part No.
650/701/760	6M6-81365	2360
1100/1200	63M-81365	4505
1200XLL/GP1200R/1300R (Oil Seal)	93102-35M57	3710

EXHAUST



010-480

010-481

### SEA DOO FLYWHEEL NUT & WOODRUFF KEY

Sea Doo	OEM#	Part No.
Flywheel Nut Sea Doo All	420-842-230	010-480
Woodruff Key Sea Doo All	420-246-055	010-481

DRIVE LINE HANDLING

ELECTRICAL

### FLYWHEEL BOLTS & KEY

Kawasaki	OEM Number	Part No.
Flywheel Bolts All Models	92150-381	010-491
Flywheel Key All Models	92038-001	010-481-01
Yamaha	OEM Number	Part No.
Flywheel Key All Models	90280-16053-00	010-481-02

WATERLINE /BILGE

STEERING & CONTROLS

BODY

ACCESSORIES

SERVICE TOOLS /HARDWARE

CHEMICAL



### MSD TIMING ADVANCE PLATE

The timing advance plate is recommended for all Kawasaki 750 engines running the Enhancer Ignition. This plate advances the timing 7° for a boost in low to mid range performance. Note: If you are running excessive compression or low octane fuel it is recommended that you run the retard module listed. Must be used with PN 4251 on SXi, XiR, and ZXi.

Description	Part No.
MSD Timing Advance Plate for Kawasaki	4332

### R&D KAWASAKI 750 & 800 SX-R TIMING ADVANCE KIT



The R&D SX-R 800 Timing kit produces a substantial performance gain with the OEM ignition system. By relocating the pickup trigger on the ignition cover a full six degrees of ignition timing is available. Initial ignition timing from 0-2000 rpm boosted from 14 to 20 degrees, mid 3000-5000 rpm from 20 to 26 degrees and overall 6500 rpm + from 12 to 18 degrees.

Description	Part No.
R&D 750/800 Timing Advance Kit	441-75001
Replacement Timing Cover Gasket Only	8050



### ADA RACING TIMING ADVANCE PLATE KAWASAKI 12F AND 15F

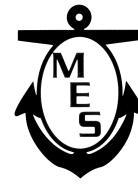
This is a stock timing trigger plate that is machined with additional locations for timing advance. Has the stock position, +3, +4, and +5 degrees. This fits the Kawasaki STX-15F and STX-12F four stroke watercraft.

Description	Part No.
ADA Racing Timing Advance Plate	31-250100





# NEW MES AQUA TORQUE STARTERS AND STARTER DRIVES



MES "High Torque" models and OEM equivalent models.  
All starters meet or exceed OEM specification.



S1090MHT  
S1090M



S1091MHT • S1091M  
\*Complete as shown with  
mounting bracket



S1096MHT-9  
S1096M-9  
\*9 Tooth Bendix



S1098MHT  
S1098M



S1102M

Sea Doo Model	OEM#	High Torque Starter	OEM Replacement Starter	Drive Gear Idle Gear
GT, SP, XP580 89-91	278-000-316	S1090MHT	S1090M	3275M/3276M
SP, SPL, SPX580 91-94	278-000-316	S1090MHT	S1090M	3275M/3276M
XP650 91-94(all)	278-000-316	S1090MHT	S1090M	3275M/3276M
580/650/720 94-00(all)	278-000-485	S1091MHT	S1091M	3275M/3276M
XP800 95, XP/GSX/GTX96	278-000-577	S1096MHT-9	S1096M-9	3275M/3276M
951(all)	278-000-98Z	S1098MHT	S1098M	3270M
4 Tec (4Stroke)	290-888-999		S1102M	Not Required
97-2003 GSX, SPX, GTX RFI, GSX RFI & 2003 GTI RFI	278-001-497/278-001-038 278-001-301	S1096MHT-8	S1096M-8	Not Required



S1095MHT  
S1095M



S1099MHT  
S1099M



S1103M



S1101M



S1097MHT

## Yamaha

500 88-89				3274M
650/701 (all)	6M6-81800-10-00	S1095MHT	S1095M	3270M
760	64X-81800-00-00	S1105MHT	S1105M	3270M
800/1100/1200 (all)	63M-81800-00-00	S1099MHT	S1099M	3270M
FX140 (4Stroke)	60E-81800-00-00	S1103MHT	S1103M	Not Required
VX1100	6D3-81800-00	S1107MHT	S1107	

## Honda

F12/F12X 1200cc Aqua Trax	31200-HW1-671		S1101M	Not Required
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## Tigershark

640/650/770/900/1000 (92-99)	3008/093/327/536	S1097MHT		3270M
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S1094MHT  
S1094M



S1092MHT  
S1092M



S1100M



S1093MHT  
S1093M

## Kawasaki

440/550/550SX (all)	21163-3710	S1094MHT	S1094M	3273M
650/750/900/1100 (all)	21163-3712	S1092MHT	S1092M	3270M
ULTRA150, STX-R	21163-3715		S1100M	Not Required

## Polaris

650/750/785/900/1050 (all)	324-01100	S1093MHT	S1093M	3270M
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3270M  
(19 tooth)



3273M  
(9 tooth)



3274M  
(11 tooth)



3275M  
9 Tooth  
(OEM 9 Tooth)



3276M  
8 Tooth  
(High Torque Unit)

**Manufacturer's Warranty Policy:** All MES products (excluding MES Economy Starters), when properly installed, are warranted by MES against defects in materials and workmanship for a period of one year from the date of sale to the original purchaser. For MES to accurately inspect defective items for warranty consideration, we ask that all returns reach our facility within the warranty period with an RA#, along with a copy of the original invoice and a brief explanation of the product's alleged malfunction.

**Non-Covered Warranty Issues:** Our warranty is limited to the replacement of defective units only and does not cover labor or any other expenses. This warranty extends to the application under normal use, and does not apply to any of the following: submersion, deliberate abuse, broken drive-gears, that are broken or tampered with during installation, or involved in attempted improper installations. Any tampering or dismantling, grinding, drilling, removing or addition of parts, or any action that alters the original design of the unit, will immediately render this warranty null and void.

FOUR STROKE  
INTAKE SYSTEMS  
ENGINE/GASKETS  
EXHAUST  
DRIVE LINE HANDLING  
ELECTRICAL  
WATERLINE /BILGE  
STEERING & CONTROLS  
BODY  
ACCESSORIES  
SERVICE TOOLS /HARDWARE  
CHEMICAL

# MES ECONOMY STARTERS



Sea Doo Model	OEM#	Economy Starter	Drive Gear/Idle Gear
GT, SP, XP580 89-91	278-000-316	C1090-NA	3275M/3276M
SP, SPL, SPX580 91-94	278-000-316	C1090-NA	3275M/3276M
XP650 91-94(all)	278-000-316	C1090-NA	3275M/3276M
580/650/720 94-00(all)	278-000-485	C1091-NA	3275M/3276M
XP800 95, XP/GSX/GTX96	278-000-577	C1096-9-NA	3275M/3276M
951(all)	278-000-98Z	C1098-NA	3270M
4 Tec (4Stroke)	290-888-999	C1102-NA	Not Required
97-2003 GSX, SPX, GTX RFI, GSX RFI & 2003 GTI RFI	278-001-497/278-001-038 278-001-301	C1096-8-NA	Not Required



Yamaha Model	OEM#	Economy Starter	Drive Gear/Idle Gear
650/701 (all)	6M6-81800-10-00	C1095-NA	3270M
800/1100/1200 (all)	63M-81800-00-00	C1099-NA	3270M

Tigershark Model	OEM#	Economy Starter	Drive Gear/Idle Gear
640/650/770/900/1000 (92-99)	3008/093/327/536	C1097-NA	3270M



Kawasaki Model	OEM#	Economy Starter	Drive Gear/Idle Gear
650/750/900/1100 (all)	21163-3712	C1092-NA	3270M
ULTRA150, STX-R	21163-3715	C1100-NA	Not Required

**Manufacturer's Warranty Policy:** All MES Economy Starters, when properly installed, are warranted by MES against defects in materials and workmanship for a period of 90 days from the date of sale to the original purchaser. For MES to accurately inspect defective items for warranty consideration, we ask that all returns reach our facility within the warranty period with an RA#, along with a copy of the original invoice and a brief explanation of the product's alleged malfunction.

**Non-Covered Warranty Issues:** Our warranty is limited to the replacement of defective units only and does not cover labor or any other expenses. This warranty extends to the application under normal use, and does not apply to any of the following: submersion, deliberate abuse, broken drive-gears, that are broken or tampered with during installation, or involved in attempted improper installations. Any tampering or dismantling, grinding, drilling, removing or addition of parts, or any action that alters the original design of the unit, will immediately render this warranty null and void.

## MES REPLACEMENT STARTER SOLENOID



### KAWASAKI SOLENOID POST

Replace corroded, stripped or broken posts without replacing the solenoid on all Kawasaki Jet Ski's with small electrical box.

Description	Part No.
Solenoid Post (2 per package)	55-3350

**YAMAHA**  
Fits 1987-2001 Yamaha Models:  
Replaces Yamaha OEM #6G1-81941-10  
**Part Number SL4001**



### MSD EXTERNAL STARTER RELAY

This 12 volt relay is a heavy duty unit designed to mount outside the electrical box. Moisture and chemicals resistant. The large copper terminals assure good solid contacts. The stainless steel base plate allows the relay to be mounted in any position. Rated at 65 amps.

Description	Part No.
MSD External Starter Relay	M4390



### STATOR COILS / PULSING COILS

Yamaha	OEM No.	Part No.
Wave Jammer 500 1987-88	6GO-85580-70	004-154
Wave Runner 500 1987-89	6GO-85580-70	004-154
SJ/WR/WRA 650 1990-93	6M6-85580-00	004-153
WRB 650VXR 1991-95	6M6-85580-00	004-153
WB701 1993	6M6-85580-00	004-153
WRB Pro VXR 701 1993	6M6-85580-00	004-153

Kawasaki	OEM No.	Part No.
440 1984-92	59026-3008	004-163
550 1982-95	59026-3008	004-163



### SEA DOO COMPLETE STATOR ASSEMBLY

Description	OEM No.	Part No.
580/650/720 95-UP	420-866-725	004-202



### STATOR COILS / EXCITER COILS

Kawasaki	OEM No.	Part No.
440 1984-92	21049-3007	004-162
550 1982-95	21049-3007	004-162
All 650 1986-95	21003-3719	004-166



### STATOR COILS / LIGHTING COILS

Yamaha	OEM No.	Part No.
Wave Jammer 500 1987-90	6K8-0103-40	004-152
Wave Runner 500 1987-93	6K8-0103-40	004-152
All 650 1990-96	6M6-85533-00	004-156
All 701 1993-95 except Raider	6K8-8103-40	004-156
Wave Raider	62T-85533-00	004-147



## OEM REPLACEMENT COILS



### STATOR COILS / CHARGE COILS

Sea Doo (Generating Coil)	OEM No.	Part No.
580 1988-90	290-866-635	004-170
580 GT 1990-91, XP/SP 1991	299-866-635	004-170
650 XP 1993-95	410-912-000	004-170
580/650/720/ 1995-up	420-866-725	004-202

Yamaha	OEM No.	Part No.
All 650 1990-95	6M6-85520-00	004-155
All 701 1993-95	6M6-05S20-00	004-155
Wave Raider	62T-85520-00	004-148

Kawasaki (Individual Coil For Stator Assy)	OEM No.	Part No.
440 1984-92	59031-3002	004-161
550 1982-95	59031-3002	004-161
All 650 1986-95	21003-3707/12/16	004-165



### IGNITION COILS OEM Replacement

Sea Doo	OEM No.	Part No.
580GT 1988-91	290-866-607	004-175

Yamaha	OEM No.	Part No.
Wave Jammer 500 1987-90	6K8-85570-010	004-150
Wave Runner 500 1987-93	6K8-85570-010	004-150
SJ650 1990-93	6R8-85570-00	004-157
WR650/III/LXR 1990-95	6R8-85570-00	004-157
FX/SJ/WB/WR/WV701 1994-95	6R8-85570-00	004-157
1100 All	63M-85570-00	004-193

Kawasaki	OEM No.	Part No.
750SX 92-94, SXI 95	21121-3705	004-157
900/1100 All	21121-3708/9/10	004-192

FOUR  
STROKE

INTAKE  
SYSTEMS

ENGINE/  
GASKETS

EXHAUST

DRIVE LINE  
HANDLING

ELECTRICAL

WATERLINE  
/BILGE

STEERING  
& CONTROLS

BODY

ACCESSORIES  
/HARDWARE

SERVICE TOOLS

CHEMICAL



# OPPAMA



*\*All Tachometers featured are for Two Stroke Engine applications only.*



## PET-2100DX TACHOMETERS

This measures engine rpm, maximum rpm, total cumulative operating time, resettable cumulative operating time. This has a dual display system for either current rpm alone or current & maximum rpm, and also has two maximum rpm memories for comparison. 2 stroke 1-4 cylinder. Made in Japan.

## WATERPROOF DELUXE TACHOMETER

Features include: Tachometer with RPM memory, Hour meter, Stopwatch with 10-data memory, clock, Power save off switch, and over-run (red line) alarm, For 2 or 3 cylinder. Made in Japan.

Description	Part No.
PET-2100DX Tachometer	PET-2100DX

Description	Part No.
PET-2500 Deluxe Tachometer	PET-2500



## TINY TACH

Hourmeter and Tachometer powered by internal battery. Sealed for moisture resistance.

## HOUR/TACH METER

Has same features as hour meter plus tachometer feature. Works on any gas engine up to 2 cylinders and 9000 RPM.

- Firing pattern 1 spark = 1 RPM
- Resolution 10 RPMs
- Maximum RPMs 9000
- Suitable for all single and twin, two or four cycle gasoline engines operating within specified tachometer firing pattern.

Description	Part No.
Digital Tiny Tach (2-Cylinder)	59-0550
Digital Tiny Tach (3-Cylinder)*	59-0552



Description	Part No.
Hour/Tach Meter	HR-8061

\*Resettable hourmeter



## MAINTAINER MODEL #CU2602

Total Amps: 0.5  
Battery System: 12Volt



## CHARGER MODEL #CU2606A

Total Amps: 6  
Battery System: 12Volt

## MAINTAINER MODEL #CU2603

Total Amps: 3  
Battery System: 12Volt



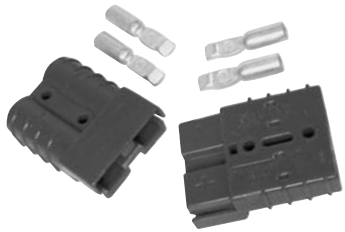
## CHARGER MODEL #CU2612A

Total Amps: 10  
Battery System: 12Volt



## GUEST 12 VOLT MAINTAINERS AND PORTABLE BATTERY CHARGERS

AMPS	TYPE	PART/MODEL #	TERMINATION	DIMENSIONS	CHARGING CABLE LENGTH	AC/WALL CABLE LENGTH	WEIGHT
.5	Maintainer	CU2602	Alligator Clips	1.5" x 3.0" x 2.0"	4'	6' w/Standard Plug	.5LBs
3	Charger	CU2603	Alligator Clips	3.1" x 3.5" x 2.34"	4'	6' w/Standard Plug	1LBs
6	Portable	CU2606A	Alligator Clips	5.5" x 5.0" x 2.4"	4'	6' w/Standard Plug	3.5LBs
10	Portable	CU2612A	Alligator Clips	7.5" x 5.0" x 2.4"	4'	6' w/Standard Plug	4.5LBs



### BATTERY QUICK DISCONNECT

Racers will appreciate this Quick Disconnect Battery Connector because it allows for easy removal of the battery. The connectors grip together to form a vibration proof connection but can easily be disconnected for quick removal for charging of the battery.

Description	Part No.
Battery Quick Disconnect	4376



### JUMPER CABLES

8 feet long heavy duty 8 gauge copper jumper cables are big on charging power, yet stow conveniently in the 9 x 9 inch nylon bag.

Description	Part No.
Jumper Cables	59-0530

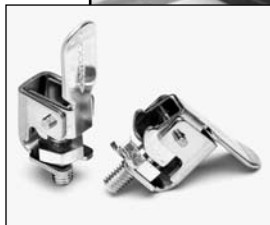
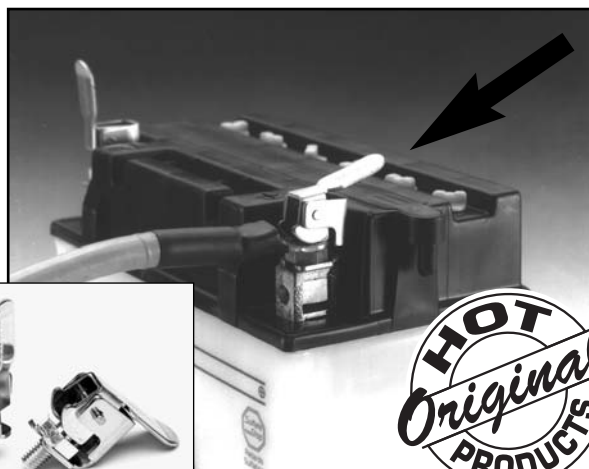
EPOXY LINED ON THE INSIDE OF THE TUBING



### EPOXY LINED HEAT SHRINK TUBING

High performance epoxy lined 1/2" id heat shrink. Just splice your wires, heat until the epoxy liquifies and your worries of possible water damage/corrosion are over! Heat shrink tubing color is Black.

Description	Part No.
Epoxy Lined Heat Shrink Tubing (4' length, 1/2" ID)	55-2032



### QUICK SNAPS

Battery cable Quick Snaps remove your battery in 10 seconds. Quick snaps are easy to install in any style watercraft or motorcycle battery. Once installed no tools are required for battery removal. Made of stainless steel.

Descriptions	Part No.
Quick Snap (2 pcs/set)	59-0527



### QUALITY BATTERY CONNECTION

Broken cable end, no problem. High quality replacement cable end, crimp on.

Descriptions	Part No.
Battery Cable Ends (2pcs/set)	55-2031



### CORROSION BLOCK MULTI-PURPOSE GREASE

Liquid grease is ideal for use in electrical applications requiring grease.

Description	Part No.
Corrosion Block Liquid 1oz. Bottle	CB-20001

FOUR STROKE	INTAKE SYSTEMS	ENGINE/ GASKETS	EXHAUST	DRIVE LINE HANDLING	ELECTRICAL	WATERLINE /BILGE	STEERING & CONTROLS	BODY	ACCESSORIES	SERVICE TOOLS /HARDWARE	CHEMICAL
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# NO MORE SEARCHING REQUIRED! HOT PRODUCTS HAS THE SWITCH FOR YOUR APPLICATION

## Hot Products PWC Waterproof Switches Imported Exclusively from



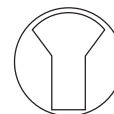
**HOT PRODUCTS  
EXCLUSIVE**

### 3-WAY PANEL MOUNT ROTARY SWITCHES

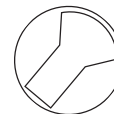
Connects to two electronic accessories for power control. Allows the operation of one or both accessories to run at the same time. Suggested uses: Second Bilge, Ignition, etc. 12Volt/5Amp.



**Left Hand  
On Position**  
Use: Blue &  
Red Wires



**Center Off  
Position**



**Right Hand  
On Position**  
Use: White &  
Red Wires



JP7043



JP7044

### UNIVERSAL HANDLEBAR MOUNT SWITCHES

Mounts to handlebar or mounts to underside of most aftermarket throttle levers. Complete with 9" wire lead.

Description	Part No.	Description	Part No.
Handlebar Mount Switch	JP7043	Handlebar Mount Switch	JP7044
12Volt/6Amp push on/off switch		12Volt/5Amp 3 way rotary switch	

Description	Part No.
Panel Mount Switch	57-3020



### MSD HOLESHOT CONTROL SWITCH

This is a momentary push-button switch encased in a CNC machined aluminum housing that clamps around the handle bar. It comes with a 6-foot wire harness that should reach almost anywhere on your watercraft. Use this switch to activate any MSD feature.

Description	Part No.
Holeshot Control Switch	4372



### CPI WATERPROOF SWITCH ONLY

This replacement safety switch fits Sea Doo's and other manufacturers.

Description	Part No.
Replacement Safety Switch (Sea Doo & other manufacturers)	57-3011



### ROTARY SWITCH COVER

Protect your ultra sano BULLETPROOF Blowsion rotary bilge switch with this sanitary powder coated black aluminum switch shield. No more broken off knobs between your toes during aerials. All mounting hardware included. (Rotary Switch is sold separately)

Description	Part No.
Rotary Switch Cover	06-01-310

## WATERPROOF SWITCHES AND BRACKETS

- Features waterproof on/off switch that is available with machined aluminum clamp-on or switch mounted bracket. Allows totally reliable and easy control of bilge pump operation.
- Mounting bracket is machined from billet alloy and is anodized black to prevent corrosion. Available for clamp-on bar mounting or bolts to the bottom of the OEM on/off switch assembly.
- All of the switches have a 9 ft. high grade wire lead.



Yamaha	Part No.	Description	Part No.
All	57-3017	Universal Handle Bar Mount	57-3006

**UNIVERSAL**



Kawasaki	Part No.	Description	Part No.
All 650's / 750SS-95 / XI-93	57-3015	Standard Switch with 9 feet of wire (No bracket included)	57-3009



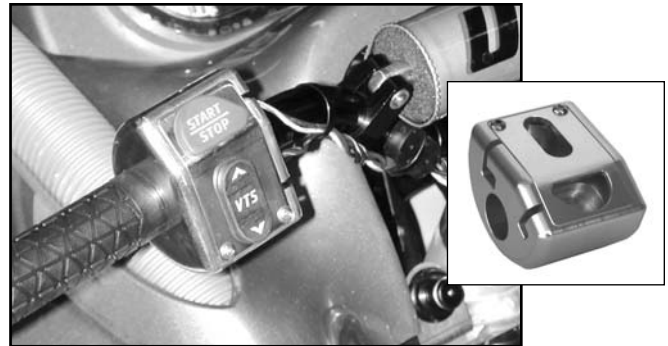
### BILLET 3 SWITCH HOLDER For Aftermarket Handlebar

Description	Color	Part No.
SeaDoo	Polished	58-2004



### BILLET STOP SWITCH HOLDER For Aftermarket Handlebar

Description	Color	Part No.
SeaDoo	Polished	58-2003



### UMI RXP TRIM/SWITCH HOUSING

U.M.I.'s trim/switch housing is machined from 6061-T6 billet aluminum, replacing the stock plastic housing. Trim/switch housing uses the factory variable trim switch and start/stop switch. This housing must be used with the U.M.I. GSX/RXP (P/#58-6321) steering system, aftermarket bars and finger throttle.

Sea Doo	Part No.
RXP Silver	SD-01600-CLR

### WATCON WATERPROOF ELECTRIC SWITCH WITH BILLET ALUMINUM BRACKET

The Multi-switch is perfect for many applications; many racers use it as a "starter" button to eliminate the bulky OEM start-stop assembly. It has also become popular with Freestyle competitors as its compact, lightweight and extremely durable. The Billet Aluminum switch is 100% waterproof and is rated for scuba use, so surf riding won't be a problem! The switch offers (2) possible wiring configurations of "normally open" & "normally closed". This allows you to wire it as a start / stop function, or as a "momentary switch". A perfect example of a momentary switch is if you were using a data acquisition program, and you wanted to "reset" the system without shutting down the power supply. Comes complete with wiring instructions, and 36" of marine rated wire.



Description	Part No.
Watcon Waterproof Electric Switch	MU-1

FOUR STROKE  
INTAKE SYSTEMS  
ENGINE/GASKETS  
EXHAUST  
DRIVE LINE HANDLING  
ELECTRICAL  
WATERLINE /BILGE  
STEERING & CONTROLS  
BODY  
ACCESSORIES  
SERVICE TOOLS /HARDWARE  
CHEMICAL







## NGK IRIDIUM IX SPARK PLUGS

Iridium is significantly stronger than any metal used in spark plugs today. The ignitability and durability is better than platinum. Sold pk/4.

### Part No.

BR8EIX	BKR7EIX-11
BR9EIX	BPR8EIX
BR8HIX	BPR9EIX
CR9EIX	DCPR8EIX

*\*All Iridium plugs are 4 per package.  
\*Iridium plugs are gapped at NGK,  
if you try to gap the plugs you  
will damage the center electrode.*



## NGK RACING CABLE

High performance red silicon outer shell for maximum heat resistance and durability. Ceramic resistor (50hm) enhances protection against RFI.

Description	Part No.
90° Resistor cover 100cm, solid	CR6



## SPARK PLUG WIRE TESTER

Now you can check spark plug wires without piercing the wires. Light flashes indicating sound wire.

Description	Part No.
Spark Plug Wire Tester	LS26900



## NGK SPECIAL SPARK PLUGS FOR 4 STROKE ENGINES

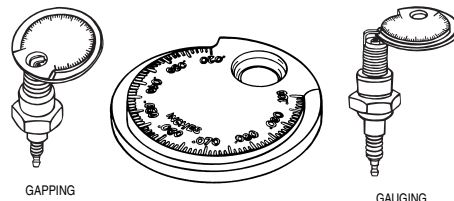
Description	Part No.
K1100 STX-DI, Ultra 130 DI (PK/4)	*PZFR7G-G
Sea Doo GTX-4TEC (PK/10)	DCPR-8E
Sea Doo GTX-DI, LRV-DI, RX-DI (PK/4)	ZFR4F-11
Yamaha FX 140/160, VX110 (PK/10)	CR9EB
Kawasaki STX 12F/15F (PK/10)	CR9EK
Kawasaki Ultra 250 (PK/4)	PMR9B
Polaris M140, Genesis (PK/4)	PZFR6H
Hydrospace S4 (PK/4)	BKR7EIX-11
Honda 4 Stroke (PK/4)p	IMR90-9H
FX SHO, FZR, FZS (PK/10)	LFR6A
Ultra 150	R6918C-9



## 8.5MM SUPER CONDUCTOR SPARK PLUG WIRE

See page 99 for details

Description	Part No.
Two Cylinder Wire Set	31009
One Cylinder Wire Set	31019
Three Cylinder Wire Set	31039
Bulk Wire 25 feet - Red	34019
Bulk Wire 25 feet - Black	34013



## STANDARD/HIGH ENERGY SPARK PLUG GAUGE & GAPPER

Gauge and gap all types of spark plugs from .020" to .110 (.50mm to 2.53mm).

Description	Part No.
Spark Plug Gauge and Gapper	LS67870



## NGK RESISTOR COVER

Waterproof spark plug resistor covers for use with resistor spark plugs.

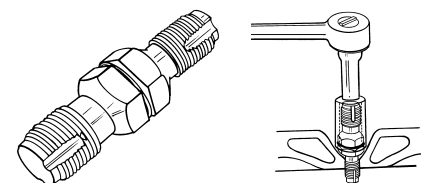
Description	Part No.
(5K OHM) 90 "T" 14mm plugs with terminal nut	TB05EM



## MSD SPARK PLUG BOOT RETAINERS

There's no excuse for losing a race due to a plug wire popping off when you run MSD's Boot Retainers. These handy clamps are molded from heat resistant nylon material and will lock the boot to the spark plug.

Description	Part No.
A. Boot Retainer, 90° Spark Plug Boots & Terminal	3340
B. 90° Spark Plug Boots & Terminal Only (2 pcs.)	3311



## SPARK PLUG HOLE THREAD CHASER

Cleans threads in spark plug hole. Use with 13/16" spark plug socket. Double-ended for both 14mm and 18mm threads.

Description	Part No.
Spark Plug Hole Thread Chaser	LS20200



## SPARK PLUG TOOLS

Description	Part No.
Ratchet Plug Wrench	59-0539

FOUR STROKE

INTAKE SYSTEMS

ENGINE/GASKETS

EXHAUST

DRIVE LINE HANDLING

ELECTRICAL

WATERLINE /BLIGE

STEERING & CONTROLS

BODY

ACCESSORIES

SERVICE TOOLS /HARDWARE

CHEMICAL