

Integral Ignition Coils

For Shielded Applications



Integral Ignition Coils – Slim Design

General Features

- 1 Primary connector
 - 3 pole for ALTRONIC® compatibility
 - 2 pole FAIRBANKS MORSE® style
- 2 Top cover with included HEX for easy installation/deinstallation
- 3 Housings made of stainless steel
- 4 Ceramic insulators inside for best temperature and electrical resistance
- 5 High voltage termination
 - 13/16-20 UNEF inner thread (Fits dual threaded spark plugs)
 - 1-20 UNEF outer thread and 13/16-20 UNEF inner thread (Fits DCP-Type spark plugs and shielded ignition coil extensions or dual threaded spark plugs)



Top cover with included HEX for easy installation/deinstallation



Integral Ignition Coils – Slim Design



Integral ignition coils are mostly used in shielded applications and are designed to be mounted directly on a dual threaded spark plug. This design does not require a spark plug lead. The ignition coil life is affected by the temperature that is transferred into the coil by the spark plug. On occasions where the spark plug leaks, high combustion pressure enters the ignition coil and forces the base coil to blow out of its housing. MOTORTECH's design with a new top cover and a modern production process will not allow this to happen.

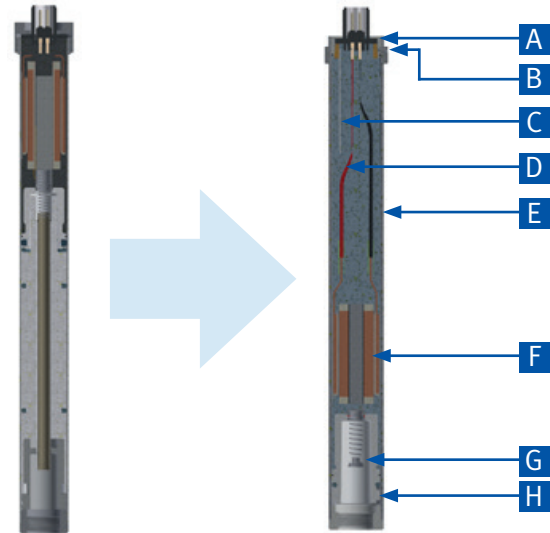


Design Improvements

- A** New top cover design with included HEX
- B** 3 set screws to prevent cover from turning
- C** New ground connection
- D** Use of potting material instead of Teflon[®]
- E** Stainless steel housing with enlarged diameter for full compability to competitor products
- F** New positioned coil core at the bottom end ensures more energy
- G** Long spring to cover full spark plug insulator range
- H** Ceramic insulator for higher temperature resistance and best flashover protection

MOTORTECH 2014 Design

MOTORTECH New Design



3 Pole Primary Connector Arrangement – ALTRONIC[®] Compatible



P/N ¹⁾	Supersedes	Color	Length	Primary Termination	HV Termination		Polarity	MOST	Equivalent to
					Outer Thread	Inner Thread			
95.09.222-6 ²⁾	95.09.012-6, 95.09.040-6 95.09.022-6	steel	6.00 in.	MIL Style 3 pole pin		13/16-20 UNEF	(-) ground	not applicable	591011A, 107-2400
95.09.222-12 ²⁾	95.09.012-12, 95.09.040-12 95.09.022-12	steel	12.00 in.	MIL Style 3 pole pin		13/16-20 UNEF	(-) ground	not applicable	591011B, 591011C, 215-2434, 69694D
95.09.223-6 ²⁾	95.09.010, 95.09.030 95.09.023-6	steel	6.00 in.	MIL Style 3 pole pin	1-20 UNEF	13/16-20 UNEF	(-) ground	not applicable	591007, 4W4959, 60615F
95.09.233-6 ³⁾	95.09.011, 95.09.031 95.09.033-6	steel	6.00 in.	MIL Style 3 pole pin	1-20 UNEF	13/16-20 UNEF	(+) ground	not applicable	591008

¹⁾ Ignition coils in 10 in. only available on special request.

²⁾ For use with MIC500, ALT I, ALT III, ALT V, CD200, CD200D, DISN, CPU90, CPU95, CEC, CATERPILLAR[®] (163-6164, 163-6108).

³⁾ For use with ALT II, DIS, CPU2000.

2 Pole Primary Connector Arrangement – FAIRBANKS MORSE[®] Style



P/N ¹⁾	Supersedes	Color	Length	Primary Termination	HV Termination		Polarity	MOST	Equivalent to
					Outer Thread	Inner Thread			
95.08.022-6 ²⁾	95.08.010-6, 95.08.030-6	steel	6.00 in.	MIL Style 2 pole pin		13/16-20 UNEF	(-) ground	not applicable	PPT2477AA6
95.08.022-12 ²⁾	95.08.010-12, 95.08.030-10	steel	12.00 in.	MIL Style 2 pole pin		13/16-20 UNEF	(-) ground	not applicable	PPT2477AA12

¹⁾ Ignition coils in 8 in. and 10 in. only available on special request.

²⁾ For use with MIC500, MIC850.

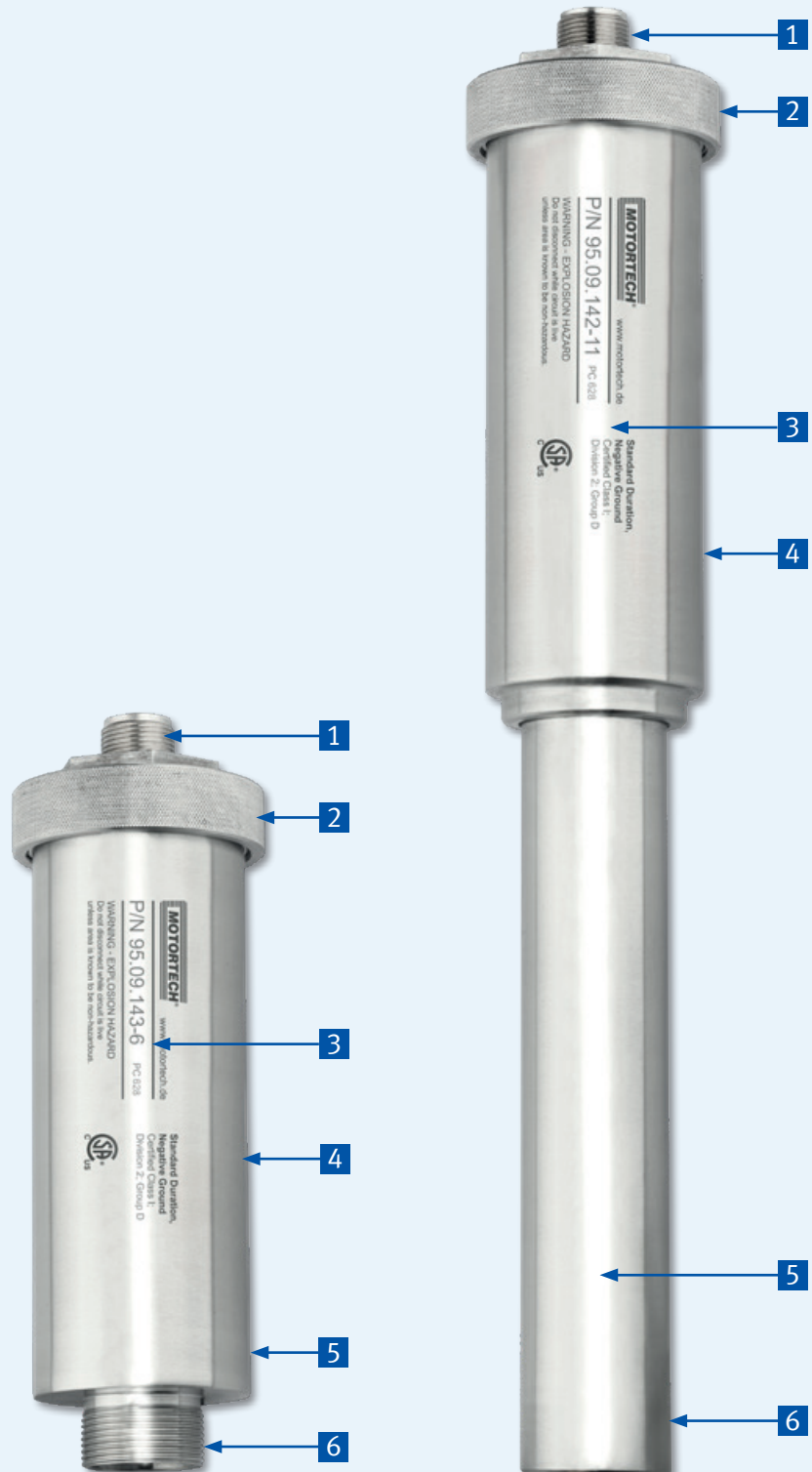
Integral Ignition Coils – Fat Design

General Features

- 1 Primary connector
 - 3 pole for MIC3+, MIC4, MIC5 compatibility
 - 3 pole for ALTRONIC® compatibility
 - 2 pole FAIRBANKS MORSE® style
- 2 Safety ring with included HEX for easy installation/deinstallation
- 3 Design offers more spark energy
- 4 Housings made of stainless steel
- 5 Ceramic insulators inside for best temperature and electrical resistance
- 6 High voltage termination
 - 13/16-20 UNEF inner thread (Fits dual threaded spark plugs)
 - 1-20 UNEF outer thread and 13/16-20 UNEF inner thread (Fits DCP-Type spark plugs and shielded ignition coil extensions or dual threaded spark plugs)



Safety ring with included HEX for easy installation/deinstallation

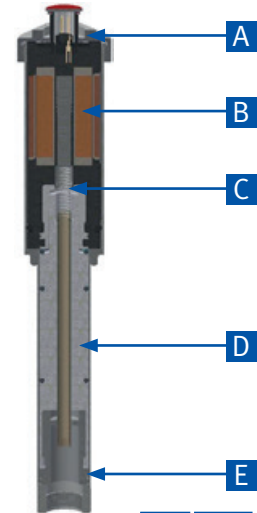
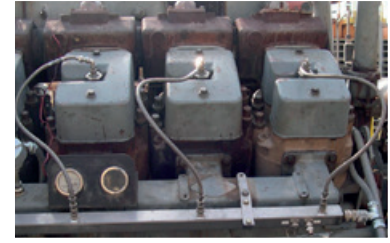


Integral Ignition Coils – Fat Design



For slow and mid speed engines it is favorable to have more spark energy available. MOTORTECH offers a full line of special and more powerful integral ignition coils with a proven design including different lengths and versions for use with MOTORTECH MIC3+, MIC4, MIC5, MIC500 and MIC850 series ignition controllers (support MOST and ASC technology) to meet the application and spark plug requirement.

For existing installations with ALTRONIC® ignition controllers, MOTORTECH offers a special series of high energy integral ignition coils with 3 pole primary connector. The ignition coils are designed to have the electrical characteristics to function with the ALTRONIC® patented “Spark Reference” high voltage indication system.



Design Features & Improvements

- A** Top cover design with included hex
- B** Larger coil core offers more spark energy
- C** Long spring to cover full spark plug insulator range
- D** Extended Teflon® insulation
- E** Ceramic insulator for higher temperature resistance and best flashover protection

3 Pole Primary Connector Arrangement – MIC3+, MIC4, MIC5 Compatible

P/N ¹⁾	Supersedes	Color	Length	Primary Termination	HV Termination		Polarity	MOST	Equivalent to
					Outer Thread	Inner Thread			
95.09.142-11 ²⁾	95.09.060-11	steel	11.00 in.	MIL Style 3 pole pin		13/16-20 UNEF	(-) ground	x	
95.09.143-6 ²⁾	95.09.013-6, 95.09.050-6	steel	6.00 in.	MIL Style 3 pole pin	1-20 UNEF	13/16-20 UNEF	(-) ground	x	

¹⁾ Ignition coils in 12 in. and 14.5 in. only available on special request. ²⁾ For use with MIC3, MIC3+, MIC4, MIC5, MIC500, MIC850. P/N 95.09.142-11 for use on WAUKESHA® VHP-GSI with rain shield.

3 Pole Primary Connector Arrangement – ALTRONIC® Compatible

P/N ¹⁾	Supersedes	Color	Length	Primary Termination	HV Termination		Polarity	MOST	Equivalent to
					Outer Thread	Inner Thread			
95.09.122-11 ²⁾	95.09.061-11	steel	11.00 in.	MIL Style 3 pole pin		13/16-20 UNEF	(-) ground	not applicable	
95.09.123-6 ²⁾	95.09.051-6	steel	6.00 in.	MIL Style 3 pole pin	1-20 UNEF	13/16-20 UNEF	(-) ground	not applicable	

¹⁾ Ignition coils in 12 in. and 14.5 in. only available on special request. ²⁾ For use with MIC500, ALT I, ALT III, ALT V, CD200, CD200D, DISN, CPU90, CPU95, CEC. P/N 95.09.122-11 for use on WAUKESHA® VHP-GSI with rain shield.

2 Pole Primary Connector Arrangement – FAIRBANKS MORSE® Style

P/N ¹⁾	Supersedes	Color	Length	Primary Termination	HV Termination		Polarity	MOST	Equivalent to
					Outer Thread	Inner Thread			
95.08.142-11 ²⁾	95.08.050-11	steel	11.00 in.	MIL Style 2 pole pin		13/16-20 UNEF	(-) ground	x	
95.08.143-6 ²⁾	95.08.020-6, 95.08.040-6	steel	6.00 in.	MIL Style 2 pole pin	1-20 UNEF	13/16-20 UNEF	(-) ground	x	PPT2477AB6

¹⁾ Ignition coils in 12 in. and 14.5 in. only available on special request. ²⁾ For use with MIC3, MIC3+, MIC4, MIC5, MIC500, MIC850. P/N 95.04.142-11 for use on WAUKESHA® VHP-GSI with rain shield.

Additional Accessories

Shielded Primary Leads

For linking an integral ignition coil to a wiring rail or an outlet box, MOTORTECH offers a great variety of high quality primary leads for shielded applications in compliance with CSA Class I, Division 2, Group D. Several different configurations with durable 90 degrees and 180 degrees 2 pole and 3 pole connectors are available.

In addition to its Conventional Style and commonly used primary leads in the field, MOTORTECH offers its New Flex Style primary lead that is produced with a special wire. The new primary leads are compliant with CSA Class I, Division 2, Group D as well and offer a significantly higher flexibility than conventional leads, shielded with braided steel, while being highly resistant to all kinds of environmental conditions. The multi-layer design of the wire is free of entrapped air and prevents the accumulation of condensed water which can result in primary voltage flash-overs.

Features

- 1 Adaptors with different thread sizes for outlet box or MIL style connectors for wiring rail connection
- 2 Available as known Conventional Style with stainless steel braid or as MOTORTECH's New Flex Style with a multi-layer design wire for maximum flexibility
- 3 MIL style ignition coil connectors in 2 pole and 3 pole and 90° and 180° configurations

ICP-Plugs – MOTORTECH Integral Coil Plugs

An integral ignition coil is directly mounted on top of a dual-threaded spark plug. MOTORTECH's ICP-Plug series includes a large type selection with different thread sizes and reaches to fit all kind of different applications. Several design improvements help to let MOTORTECH ICP-Plugs perform better than competitor products.

Features

- 4 Additional silicone insulation on ceramic isolator for best flashover protection
- 5 Only ICP-Plugs meet the CSA requirements with their 13/16-20 UNEF thread with full 6 six threads for coil connection
- 6 Rigid welds
- 7 Different thread sizes and reaches available
- 8 J-type electrode design ensures better combustion
- 9 Iridium alloy on center and ground electrodes



Additional Accessories



Ignition Coil Tester

This test equipment is designed to offer service companies a professional tool to test all different kinds of ignition coils that were sold by engine manufacturers or aftermarket companies. Aside from the CD ignition unit, the ignition coil tester comprises connection leads and adapters for a variety of common ignition coil types.

With a grounding probe, the insulation of the coils can be checked for defects. This way, you can detect even cracks that are invisible to the naked eye. In addition, you can verify the values for the secondary voltage and the spark duration with an oscilloscope.



ScopeLite – MOTORTECH Timing Light

The self-powered ScopeLite is designed to work with fully shielded ignition systems. A special clamp picks up the small trigger signal through the braid of conventional or MOT-Blues shielded spark plug leads. The signal is processed by the timing light and via LED technology a sequence of flashes is generated. On applications where MOTORTECH flange ignition coils with diagnostic interface are used, the ScopeLite can be attached directly to the BNC connector of the ignition coil.

Even on applications with integral or standard flange ignition coils, the clamp can be attached to the shielded primary lead. When timing is checked on engines with non-shielded spark plug leads, a selector switch needs to be pushed which then steps down sensitivity. The automatic time based shut-off function saves the 2 built in 9 V batteries in case the operator forgets to turn off power. Make it easy and safe for the operator!



Teflon Grommets for Integral Ignition Coils

As an additional accessory, MOTORTECH offers suitable grommets for certain applications. Made of Teflon, these grommets perfectly fit the slim and fat design integral coil and protect the spark plug well against dirt and fluids.

P/N	Description	Material	Integral Ignition Coil Type	Engine Make and Model
06.84.116	Grommet	Teflon	Slim design	CATERPILLAR® G3300 series
06.84.026	Grommet	Silicone	Slim Design	CATERPILLAR® G3400 series
06.84.117	Grommet	Teflon	Slim design	CATERPILLAR® G3400 series
06.84.069	Grommet	Teflon	Fat design	WAUKESHA® VHP and VGF series



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