

# Ignition Coils

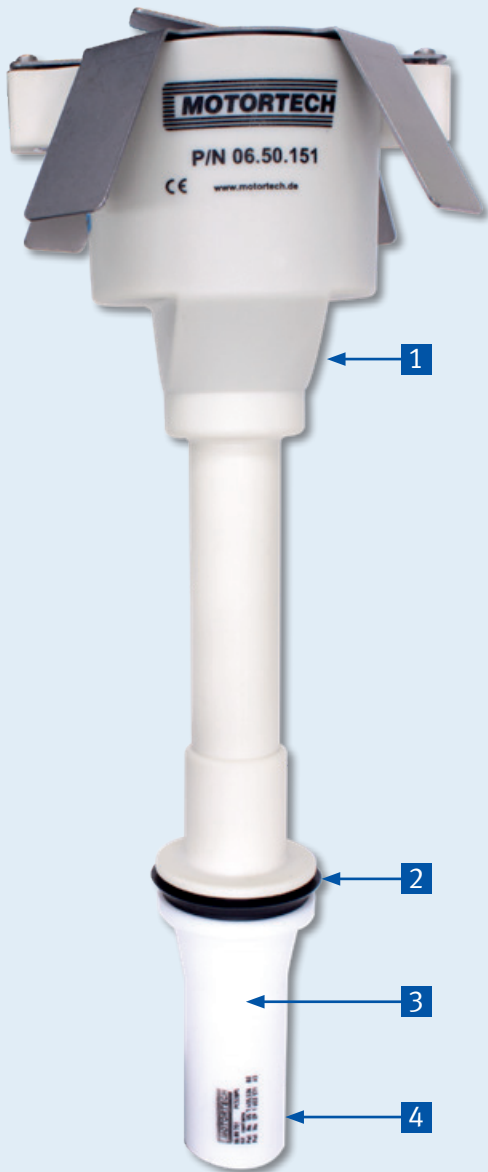
For CATERPILLAR<sup>®</sup> Gas Engines  
G3400, G3500, G3600 & GCM34 Series



**Ignition Coils**  
reliable • efficient • worldwide

# ■ G3400 & G3500 Series Engines

## Ignition Coils



### Features – For Non CSA Applications

- 1 Reinforced housing
- 2 Improved design eliminates the need for a metal ring
- 3 Patented spring-loaded secondary terminal inside<sup>1)</sup>
- 4 Teflon<sup>®</sup> ignition coil extension including spark plug seal



### Features – For CSA Applications

- 5 Reinforced housing
- 6 Stainless steel adaptor to meet CSA specifications
- 7 Patented spring-loaded secondary terminal inside<sup>1)</sup>
- 8 Teflon<sup>®</sup> ignition coil extension including spark plug seal

<sup>1)</sup> Patent No.: US 7,455,536 B2/EP 1 653 571 A3

# G3400 & G3500 Series Engines



## General Features

- Fully compatible with original ignition coils
- Support CATERPILLAR® ignition systems (EIS/ADEM Control)
- Available in different versions for use on Non CSA and CSA applications
- Special types for support of MIC ignition controllers available
- Patented spring-loaded secondary terminal inside ensures proper and reliable connection to spark plug<sup>1)</sup>
- Ignition coil extensions made of high-quality Teflon® for high dielectric strength



### For CATERPILLAR® G3400 & G3500 Series Gas Engines (Non CSA Applications)

P/N	Color	Primary Termination	HV Termination	Polarity	MOST	Equivalent to
06.50.141	white	DEUTSCH® connector	female	(-) ground	not applicable	437-4049, 232-6348, 165-1591, 131-3277, 129-8802, 108-0615
06.50.145 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	437-4049, 232-6348, 165-1591, 131-3277, 129-8802, 108-0615
06.50.143	white	DEUTSCH® connector	female	(-) ground	not applicable	232-6352, 213-7443
06.50.147 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	232-6352, 213-7443
06.50.151	white	DEUTSCH® connector	female	(-) ground	not applicable	418-4861, 232-6346, 165-1589, 124-0749
06.50.155 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	418-4861, 232-6346, 165-1589, 124-0749
06.50.153	white	DEUTSCH® connector	female	(-) ground	not applicable	437-4106, 232-6350, 199-9011
06.50.157 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	437-4106, 232-6350, 199-9011

<sup>2)</sup> Ignition coils only for use with MIC3+, MIC4 or MIC5 ignition controllers.

### For CATERPILLAR® G3400 & G3500 Series Gas Engines (CSA Applications)

P/N	Color	Primary Termination	HV Termination	Polarity	MOST	Equivalent to
06.50.142	white	DEUTSCH® connector	female	(-) ground	not applicable	232-6349, 165-1592, 122-8070
06.50.146 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	232-6349, 165-1592, 122-8070
06.50.144	white	DEUTSCH® connector	female	(-) ground	not applicable	232-6353, 213-7444
06.50.148 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	232-6353, 213-7444
06.50.152	white	DEUTSCH® connector	female	(-) ground	not applicable	437-4047, 232-6347, 165-1590
06.50.156 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	437-4047, 232-6347, 165-1590
06.50.154	white	DEUTSCH® connector	female	(-) ground	not applicable	418-4862, 259-2078
06.50.158 <sup>2)</sup>	white	DEUTSCH® connector	female	(-) ground	x	418-4862, 259-2078

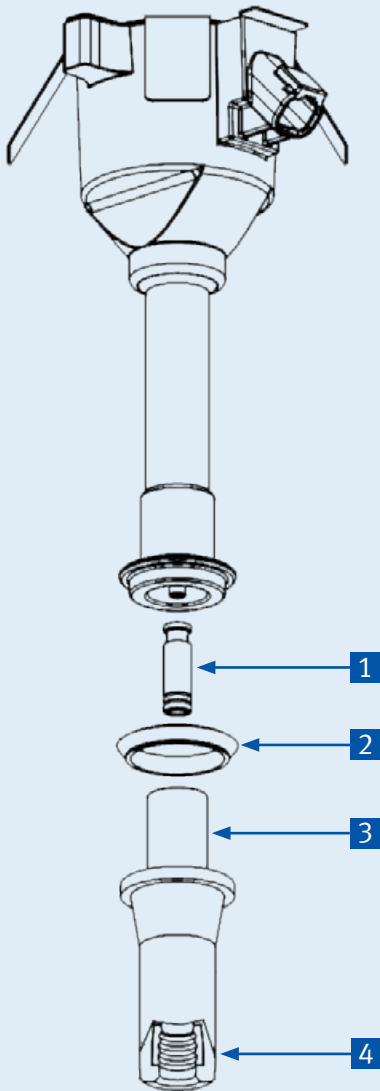
<sup>2)</sup> Ignition coils only for use with MIC3+, MIC4 and MIC5 ignition controllers.

# ■ G3400 & G3500 Series Engines

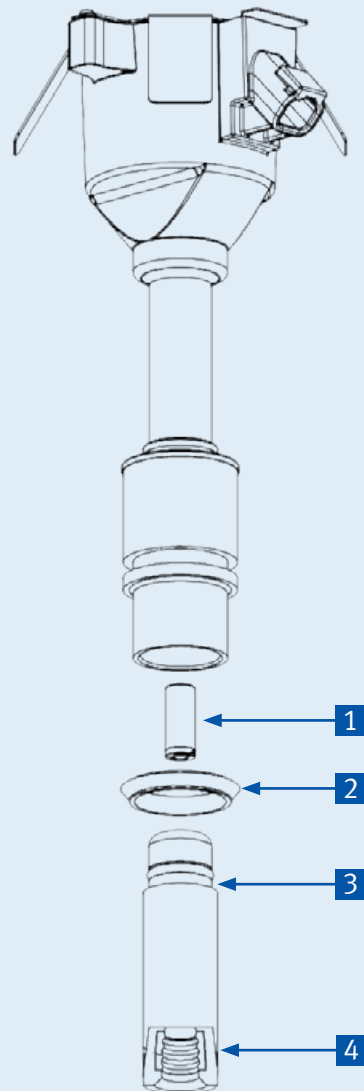
## Ignition Coil Extension Overhaul Kits

Overhaul kits include

- 1 Secondary terminal<sup>1)</sup>
- 2 Lip seal
- 3 Ignition coil extension
- 4 Spark plug seal installed in extension



Non CSA Application



CSA Application

# G3400 & G3500 Series Engines



## Kits for **MOTORTECH** Ignition Coils – For CATERPILLAR® G3400 & G3500 Series Gas Engines

P/N	Supersedes	Description	Application	Extension Length	Extension Diameter	Fits Ignition Coil P/N
06.80.741		Extension overhaul kit	G3400 - Non CSA	95 mm	30 mm	06.50.141, 06.50.145
06.80.742		Extension overhaul kit	G3400 - CSA	97 mm	30 mm	06.50.142, 06.50.146
06.80.743		Extension overhaul kit	G3400 - Non CSA	107 mm	30 mm	06.50.143, 06.50.147
06.80.744		Extension overhaul kit	G3400 - CSA	109 mm	30 mm	06.50.144, 06.50.148
06.80.751		Extension overhaul kit	G3500 - Non CSA	118 mm	30 mm	06.50.151, 06.50.155
06.80.752		Extension overhaul kit	G3500 - CSA	105 mm	30 mm	06.50.152, 06.50.156
06.80.753		Extension overhaul kit	G3500 - Non CSA	112 mm	30 mm	06.50.153, 06.50.157
06.80.754		Extension overhaul kit	G3500 - CSA	105 mm	30 mm	06.50.154, 06.50.158

### Above Kits contain following Subcomponents

P/N	P/N Extension including Seal	P/N included Spark Plug Seal	P/N included Extension Seal	P/N Lip Seal	P/N Secondary Terminal
06.80.741	06.80.741-2	06.84.059		06.81.051	02.85.881
06.80.742	06.80.742-2	06.84.059	06.81.084	06.81.051	06.51.134
06.80.743	06.80.743-2	06.84.059		06.81.051	06.51.136
06.80.744	06.80.744-2	06.84.059	06.81.084	06.81.051	06.51.133
06.80.751	06.80.751-2	06.84.040		06.81.051	02.85.881
06.80.752	06.80.752-2	06.84.040	06.81.084	06.81.051	02.85.870
06.80.753	06.80.753-2	06.84.040		06.81.051	02.85.881
06.80.754	06.80.754-2	06.84.040	06.81.084	06.81.051	02.85.870

## Kits for **CATERPILLAR**® Ignition Coils – For CATERPILLAR® G3400 & G3500 Series Gas Engines

P/N	Supersedes	Description	Application	Extension Length	Extension Diameter	Fits Ignition Coil P/N
06.80.419H		Extension overhaul kit	G3400 - Non CSA	95 mm	30 mm	232-6348, 165-1591, 131-3277, 129-8802, 108-0615
06.80.742	06.80.418H	Extension overhaul kit	G3400 - CSA	97 mm	30 mm	232-6349, 165-1592, 122-8070
06.80.420H		Extension overhaul kit	G3400 - Non CSA	107 mm	30 mm	232-6352, 213-7443
06.80.744	06.80.417H	Extension overhaul kit	G3400 - CSA	109 mm	30 mm	232-6353, 213-7444
06.80.515H	06.80.315H	Extension overhaul kit	G3500 - Non CSA	118 mm	30 mm	232-6346, 165-1589, 124-0749
06.80.752	06.80.415H	Extension overhaul kit	G3500 - CSA	105 mm	30 mm	232-6347, 165-1590
06.80.480		Extension overhaul kit	G3500 - Non CSA	112 mm	30 mm	232-6350
06.80.754	06.80.415H	Extension overhaul kit	G3500 - CSA	105 mm	30 mm	259-2078

### Above Kits contain following Subcomponents

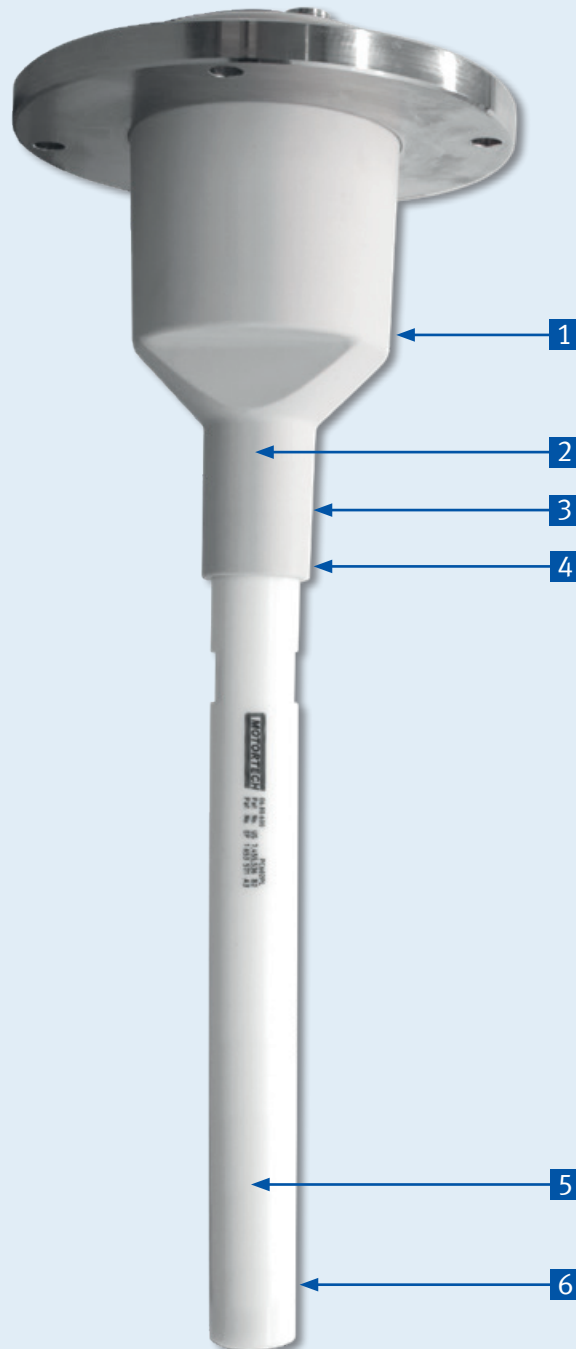
P/N	P/N Extension including Seal	P/N included Spark Plug Seal	P/N included Extension Seal	P/N Lip Seal	P/N Secondary Terminal
06.80.419H	06.80.279H	06.84.059		06.81.051	02.85.881
06.80.742	06.80.742-2	06.84.059	06.81.084	06.81.051	06.51.134
06.80.420H	06.80.280H	06.84.059		06.81.051	06.51.136
06.80.744	06.80.744-2	06.84.059	06.81.084	06.81.051	06.51.133
06.80.515H	06.80.335H-1	06.84.040		06.81.051	02.85.881
06.80.752	06.80.752-2	06.84.040	06.81.084	06.81.051	02.85.870
06.80.480	06.80.481	06.84.040		06.81.051	02.85.881
06.80.754	06.80.754-2	06.84.040	06.81.084	06.81.051	02.85.870

# ■ G3500C/E & G3600 Series Engines

## Ignition Coils

### Features

- 1 Reinforced housing
- 2 New high voltage termination
- 3 New extension to coil termination
- 4 Extended housing with longer flashover distance
- 5 Patented spring-loaded secondary terminal inside<sup>1)</sup>
- 6 Teflon<sup>®</sup> ignition coil extension including spark plug seal



<sup>1)</sup> Patent No.: US 7,455,536 B2/EP 1 653 571 A3

# G3500C/E & G3600 Series Engines



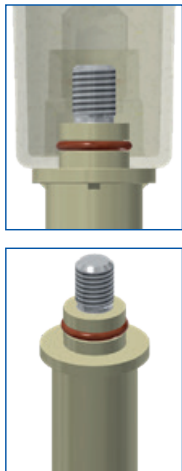
## General Features

- Fully compatible with original ignition coils
- Support CATERPILLAR® ignition systems (ADEM Control)
- Special types for support of MIC ignition controllers available
- Improved design with new and innovative extension to coil termination
- Extended housing on secondary side offers maximum protection against flashovers
- Patented spring-loaded secondary terminal inside ensures proper and reliable connection to spark plug<sup>1)</sup>
- Ignition coil extension made of high-quality Teflon® for high dielectric strength

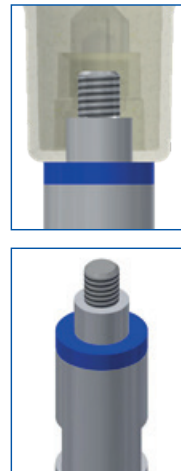


## Design Improvements

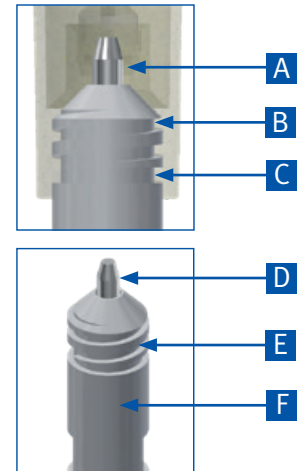
### CATERPILLAR® Design



### MOTORTECH 2014 Design



### MOTORTECH New Design



## Ignition Coil

- A** New high voltage termination
- B** New extension to coil termination
- C** Extended housing with longer flashover distance for improved dielectric strength

## Ignition Coil Extension

- D** Spring-loaded secondary terminal rod
- E** Large thread for extension to coil termination
- F** New Teflon® ignition coil extension

For CATERPILLAR® G3500C/E & G3600 Series with Ignition Coil Extension

P/N	Supersedes	Color	Primary Termination	HV Termination	Polarity	MOST	Equivalent to
06.50.164	06.50.161	white	MIL Style 3 pole pin	female	(-) ground	not applicable	438-5682, 310-3180, 283-5269, 232-6351, 191-9346
06.50.165 <sup>2)</sup>	06.50.162	white	MIL Style 3 pole pin	female	(-) ground	x	438-5682, 310-3180, 283-5269, 232-6351, 191-9346

<sup>2)</sup> Ignition coil only for use with MIC3+, MIC4 and MIC5 ignition controllers.

# GCM34 Series Engines

## Ignition Coils

### Features

- 1 Reinforced housing
- 2 New high voltage termination
- 3 New extension to coil termination
- 4 Extended housing with longer flashover distance
- 5 Including PolyMot™ ignition coil extension made of high quality Teflon®<sup>1)</sup>
- 6 Ignition coil extension including spark plug seal



<sup>1)</sup> Patent No.: 19611283/US 6,068,495



# GCM34 Series Engines



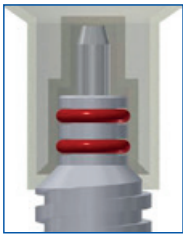
## General Features

- Fully compatible with original ignition coils
- Support CATERPILLAR® ignition systems (ADEM Control)
- Special types for support of MIC ignition controllers available
- Improved design with new and innovative extension to coil termination
- Extended housing on secondary side offers maximum protection against flashovers
- Including PolyMot™ ignition coil made of high-quality Teflon® for high dielectric strength<sup>1)</sup>

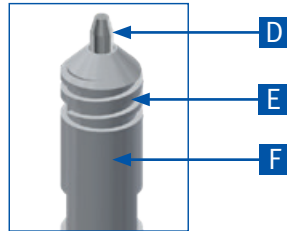
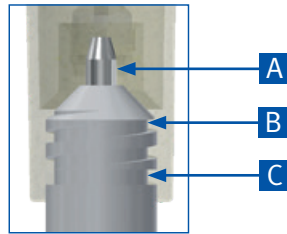


## Design Improvements

### CATERPILLAR® Design



### MOTORTECH New Design



### Ignition Coil

- A** New high voltage termination
- B** New extension to coil termination
- C** Extended housing with longer flashover distance for improved dielectric strength

### Ignition Coil Extension

- D** Spring-loaded secondary terminal rod
- E** Large thread for extension to coil termination
- F** New Teflon® ignition coil extension

### For CATERPILLAR® GCM34 Series with Ignition Coil Extension

P/N	Supersedes	Color	Primary Termination	HV Termination	Polarity	MOST	Equivalent to
06.50.174	06.50.170	white	MIL Style 3 pole pin	female	(-) ground	not applicable	193-468157, 258-4893
06.50.175 <sup>2)</sup>		white	MIL Style 3 pole pin	female	(-) ground	x	193-468157, 258-4893

<sup>2)</sup> Ignition coil only for use with MIC3+, MIC4 and MIC5 ignition controllers.

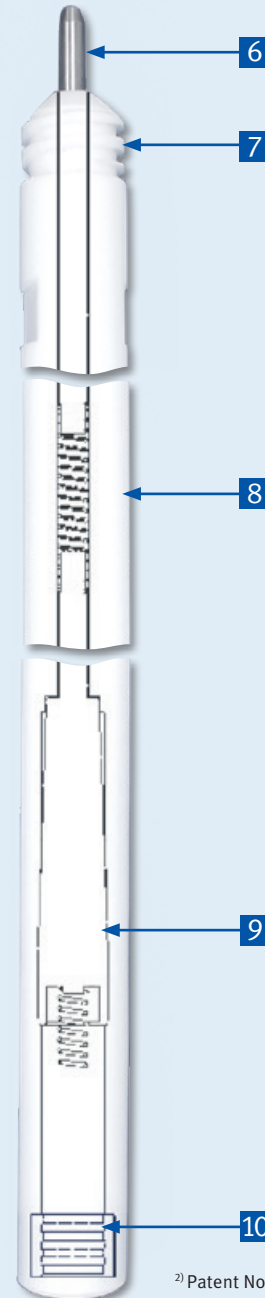
# ■ G3500C/E, G3600 & GCM34 Series Engines

## Ignition Coil Extensions



### G3500C/E & G3600 Series

- 1** Spring-loaded secondary terminal rod
- 2** Large thread for extension to coil termination
- 3** New Teflon® ignition coil extension
- 4** Patented spring-loaded secondary terminal inside<sup>1)</sup>
- 5** Teflon® ignition coil extension including spark plug seal



### GCM34 Series

- 6** Spring-loaded secondary terminal rod
- 7** Large thread for extension to coil termination
- 8** PolyMot™ ignition coil extension<sup>2)</sup>
- 9** Ceramic insert with 5kΩ resistor for suppression of electromagnetic interference (EMI) ensures proper and reliable connection to spark plug
- 10** Teflon® ignition coil extension including spark plug seal

<sup>1)</sup> Patent No.: US 7,455,536 B2/EP 1 653 571 A3

<sup>2)</sup> Patent No.: 19611283/US 6,068,495

# ■ G3500C/E, G3600 & GCM34 Series Engines



## General Features:

- Rigid design
- Made of high-quality Teflon®
- Reliable ignition coil and spark plug termination
- Spring-loaded secondary terminal to ignition coil
- Critical high voltage areas are protected with a silicone seal
- Designed to match the engine model, the spark plug type and application
- Long life product



## Extensions for **MOTORTECH/CATERPILLAR®** Ignition Coils – For CATERPILLAR® G3500C/E & G3600 Series Gas Engines

P/N	Description	Resistance	Extension Length	Extension Diameter	Fits Ignition Coil P/N	Equivalent to
06.80.600	Ignition coil extension	0 kΩ	252 mm	26 mm	06.50.164, 06.50.165	
06.80.459H <sup>3)</sup>	Ignition coil extension	0 kΩ	248 mm	26 mm	06.50.161, 06.50.162, 438-5682, 283-5270, 283-5269, 191-9346	283-5271, 308-1380, 264-5323, 150-2050

<sup>3)</sup> Supersedes spark plug extensions P/N 06.80.375H and 06.80.446H.

## Extensions for **MOTORTECH/CATERPILLAR®** Ignition Coils – For CATERPILLAR® GCM34 Series Gas Engines

P/N	Description	Resistance	Extension Length	Extension Diameter	Fits Ignition Coil P/N	Equivalent to
06.80.602	Ignition coil extension	5 kΩ	534 mm	26 mm	06.50.174, 06.50.175	
06.80.1013-T	Ignition coil extension	5 kΩ	530 mm	26 mm	06.50.170, 193-468157, 258-4893	263210167, 3400.7-21.07.02-03

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#### MOTORTECH GmbH

Hogrevestr. 21-23  
29223 Celle  
Germany  
Phone: +49 (5141) 93 99 0  
Fax: +49 (5141) 93 99 99  
[www.motortech.de](http://www.motortech.de)  
[sales@motortech.de](mailto:sales@motortech.de)

#### MOTORTECH Americas, LLC

1400 Dealers Avenue, Suite A  
New Orleans, LA 70123  
USA  
Phone: +1 (504) 355 4212  
Fax: +1 (504) 355 4217  
[www.motortechamericas.com](http://www.motortechamericas.com)  
[info@motortechamericas.com](mailto:info@motortechamericas.com)

#### MOTORTECH Shanghai Co. Ltd.

Room 1018 Enterprise Square,  
No. 228 Meiyuan Road,  
Zhabei District, 200070 Shanghai  
China  
Phone: +86 (21) 6380 7338  
[www.motortechshanghai.com](http://www.motortechshanghai.com)  
[info@motortechshanghai.com](mailto:info@motortechshanghai.com)

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