



APPLICATION GUIDE



FOR CATERPILLAR® G3300 SERIES

reliable • efficient • worldwide

IGNITION CONTROLLERS

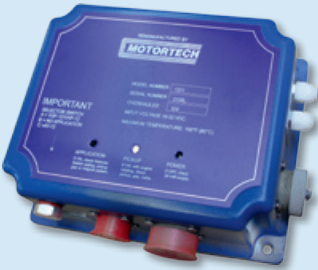


MIC3+ Series Ignition Controllers

- ▶ High energy ignition controller for retrofits
- ▶ Plug & play solution
- ▶ Patented technology (Patent No. US 8,893,692 BS)
- ▶ For use with G3304, G3306

P/N 66.00.356-8

Equivalent to:
CATERPILLAR® P/N 163-6164



CATERPILLAR® Digital Ignition Controllers – Refurbished

- ▶ MOTORTECH refurbished ignition controllers
- ▶ Come with a 1 year warranty
- ▶ Always consult factory for availability

P/N 163-6164-R

Equivalent to:
CATERPILLAR® P/N 163-6164

As good as new!



MOTORTECH Repair and Overhaul Service

Based on years of technical experience MOTORTECH offers a comprehensive repair and overhaul service for almost all popular ignition controllers.

Our economically remanufacturing process covers intensive inspections, parts replacement, extensive reconditioning and full operational test procedures. Within an average of four weeks (depends on customer location) we return a fully functional product that looks as good as new.

Flatrate Overhaul of:

- CATERPILLAR® ignition controllers for G3300/G3400 series gas engines
- ALTRONIC® DISN series
- All MOTORTECH ignition controllers

Ignition Coils

- ▶ ALTRONIC® Style
- ▶ For unshielded applications

P/N 06.50.054

Equivalent to:
CATERPILLAR® P/N 4W-5439
ALTRONIC® P/N 591010



- ▶ ALTRONIC® Style
- ▶ For unshielded applications

P/N 06.50.055

Equivalent to:
CATERPILLAR® P/N 2W-3747
ALTRONIC® P/N 501061



Integral Ignition Coils – Slim Design

- ▶ 6 in. length
- ▶ 13/16-20 UNEF inner thread
- ▶ 3 pole primary connector

P/N 95.09.222-6

Equivalent to:
CATERPILLAR® P/N 107-2400
ALTRONIC® P/N 591011A



Grommet for Integral Ignition Coils

- ▶ Teflon grommet

P/N 06.84.116



Pickups



- ▶ Hall effect pickup – Active Low
- ▶ Thread size 5/8 in.-18 UNF
- ▶ 2.5 in. length
- ▶ For unshielded and shielded applications

P/N 95.70.002-250

Equivalent to:
CATERPILLAR® P/N 116-6806
ALTRONIC® P/N 791050-2

Wiring Harnesses

- ▶ For ALT III ignition magneto
- ▶ For unshielded applications up to 8 cylinders
- ▶ MIL connector, 14 pole, socket, 180°
- ▶ 180 in. length

P/N 06.31.030-1

Equivalent to:
 CATERPILLAR® P/N 2W-3742
 ALTRONIC® P/N 393018-1

- ▶ For ALT III ignition magneto
- ▶ For unshielded applications up to 12 cylinders
- ▶ MIL connector, 14 pole, socket, 180°
- ▶ 180 in. length

P/N 06.31.030-2

Equivalent to:
 CATERPILLAR® P/N 2W-3744
 ALTRONIC® P/N 393018-2



- ▶ For ALT III/III-CPU/V ignition magneto
- ▶ For unshielded applications up to 6 cylinders
- ▶ MIL connector, 7 pole, socket, 180°
- ▶ 180 in. length

P/N 06.31.032-2

Equivalent to:
 CATERPILLAR® P/N 2W-3748
 ALTRONIC® P/N 393023-2

- ▶ For ALT III/III-CPU ignition magneto
- ▶ For shielded applications up to 8 cylinders
- ▶ MIL connector, 14 pole, socket, 90°
- ▶ 48 in. conduit length, 72 in. conductor length

P/N 95.30.008-7

Equivalent to:
 CATERPILLAR® P/N 4W-5468
 ALTRONIC® P/N 393014-7



Primary Leads for shielded Applications



Conventional Style

- ▶ Available as Conventional Style and New Flex Style
- ▶ Ignition coil connector 3 pole, socket, 90°
- ▶ 2 wire conductor
- ▶ 1/2-14 NPT outlet box adaptor

P/N 95.01.020-60

Equivalent to:
 CATERPILLAR® P/N 1N-3735
 ALTRONIC® P/N 593027-60

Optional:
P/N 95.01.120-60

New Flex Style

P/N 95.01.020-72

Equivalent to:
 CATERPILLAR® P/N 1N-3736
 ALTRONIC® P/N 593027-72

Optional:
P/N 95.01.120-72

New Flex Style

P/N 95.01.020-84

Equivalent to:
 CATERPILLAR® P/N 1N-3738
 ALTRONIC® P/N 593027-84

Optional:
P/N 95.01.120-84

New Flex Style

P/N 95.01.020-96

Equivalent to:
 CATERPILLAR® P/N 1N-3739
 ALTRONIC® P/N 593027-96

Optional:
P/N 95.01.120-96

New Flex Style

P/N 95.01.020-108

Equivalent to:
 CATERPILLAR® P/N 1N-3740
 ALTRONIC® P/N 593027-108

Optional:
P/N 95.01.120-108

New Flex Style

P/N 95.01.020-120

Equivalent to:
 CATERPILLAR® P/N 1N-3741
 ALTRONIC® P/N 593027-120

Optional:
P/N 95.01.120-120

New Flex Style

Primary Leads for shielded Applications

P/N 95.01.020-48

Equivalent to:
 CATERPILLAR® P/N 4W-5467
 ALTRONIC® P/N 593027-48

Optional:
 P/N 95.01.120-48

New Flex Style

P/N 95.01.020-12

Equivalent to:
 CATERPILLAR® P/N 4W-6741
 ALTRONIC® P/N 593027-12

Optional:
 P/N 95.01.120-12

New Flex Style

P/N 95.01.020-24

Equivalent to:
 CATERPILLAR® P/N 4W-6742
 ALTRONIC® P/N 593027-24

Optional:
 P/N 95.01.120-24

New Flex Style

P/N 95.01.020-42

Equivalent to:
 CATERPILLAR® P/N 4W-6743
 ALTRONIC® P/N 593027-42

Optional:
 P/N 95.01.120-42

New Flex Style

P/N 95.01.020-54

Equivalent to:
 CATERPILLAR® P/N 4W-6744
 ALTRONIC® P/N 593027-54

Optional:
 P/N 95.01.120-54

New Flex Style

P/N 95.01.020-132

Equivalent to:
 CATERPILLAR® P/N 4W-6745
 ALTRONIC® P/N 593027-132

Optional:
 P/N 95.01.120-132

New Flex Style



New Flex Style

Primary Leads for shielded Applications



Conventional Style

P/N 95.01.020-138

Optional:
P/N 95.01.120-138

Equivalent to:
CATERPILLAR® P/N 4W-6746
ALTRONIC® P/N 593027-138

New Flex Style

P/N 95.01.020-150

Optional:
P/N 95.01.120-150

Equivalent to:
CATERPILLAR® P/N 4W-6747
ALTRONIC® P/N 593027-150

New Flex Style



New Flex Style

Spark Plug Leads

- ▶ Spark plug lead
- ▶ Fits spark plug P/N 2N-2839 and plug adaptor P/N 7N-1743
- ▶ Fits ignition coil P/N 4W-5439, 2W-3747

P/N 06.88.009-16

Equivalent to:
CATERPILLAR® P/N 7W-2479



IGNITION WIRING RAILS & HARDWARE

Ignition Upgrade Kits to replace Magneto Ignition Systems



- ▶ For unshielded applications
- ▶ Incl. MIC3+ ignition controller

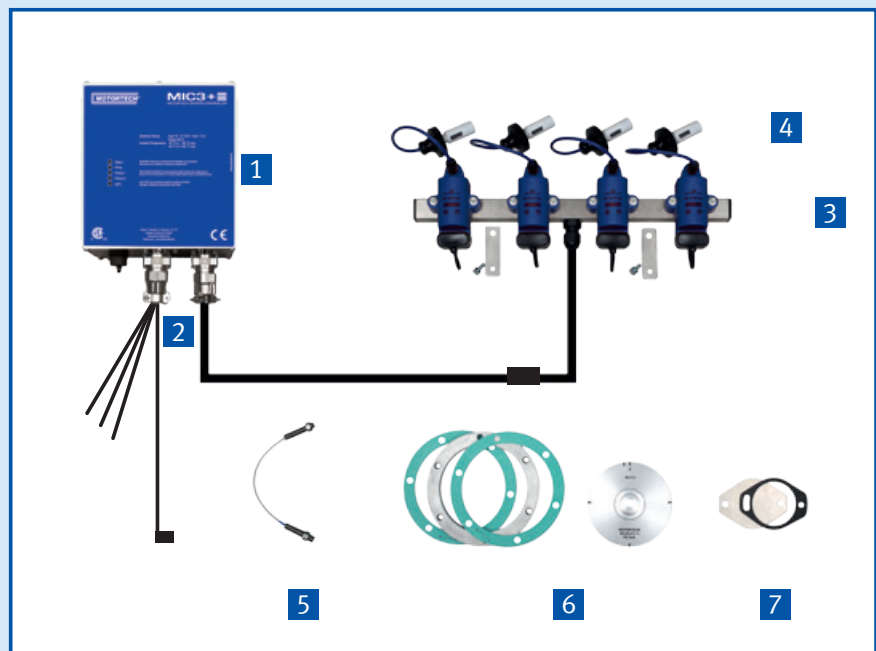
Ignition Upgrade Kit for In-line Engine CATERPILLAR® G3304

Kit contains:

- MIC3+ series ignition controller **1**
- Input and output harnesses **2**
- AlphaRail wiring rail with high energy ignition coils and brackets **3**
- Spark plug leads **4**
- Pickup **5**
- Mechanical trigger conversion kit with trigger disc, spacer, gaskets **6**
- Magneto flange cover kit **7**

P/N 75.00.536

Ignition upgrade kit for
CATERPILLAR® G3304



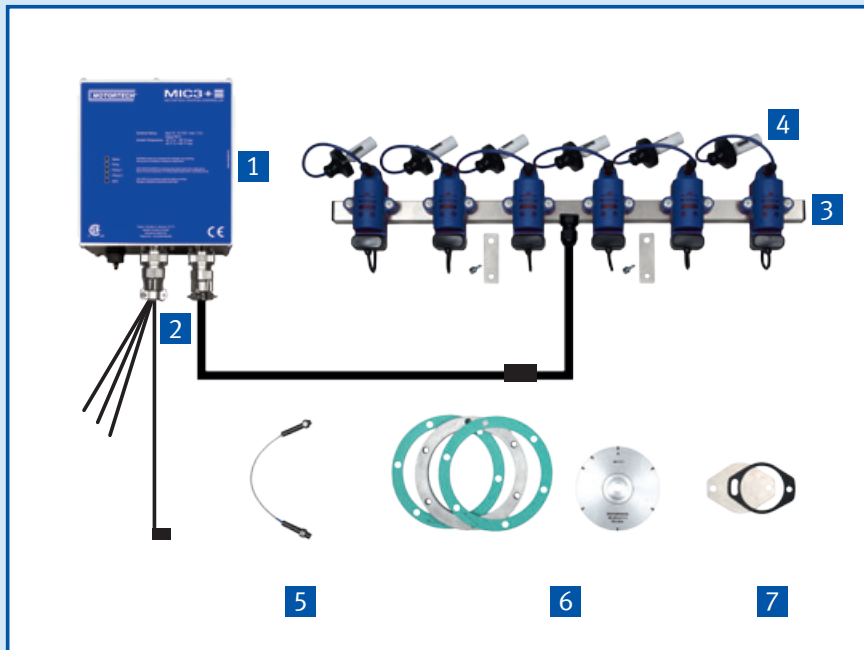
Ignition Upgrade Kit for In-line Engine CATERPILLAR® G3306

Kit contains:

- MIC3+ series ignition controller **1**
- Input and output harnesses **2**
- AlphaRail wiring rail with high energy ignition coils and brackets **3**
- Spark plug leads **4**
- Pickup **5**
- Mechanical trigger conversion kit with trigger disc, spacer, gaskets **6**
- Magneto flange cover kit **7**

P/N 75.00.537

Ignition upgrade kit for
CATERPILLAR® G3306



SPARK PLUGS & ACCESSORIES

Spark Plugs (M14x1.25 Thread Size – 0.750 in. Thread Reach)



- ▶ Fine wire electrode (Au/Pd)
- ▶ Recommended for natural gas

P/N RN79G (CHAMPION®)

Equivalent to:
CATERPILLAR® P/N 2N-2839

Optional:

- ▶ J-type electrode (Ir/Pt)
- ▶ Recommended for natural gas

P/N GE3-1 (DENSO®)

Optional:

- ▶ J-type electrode (Ir/Ir)
- ▶ Recommended for special gas

P/N GE3-5 (DENSO®)

-
- ▶ For use with integral ignition coils
 - ▶ Fine wire electrode (Au/Pd)
 - ▶ Recommended for natural gas

P/N RTN79G (CHAMPION®)

Equivalent to:
CATERPILLAR® P/N 4W-2256

Optional:

- ▶ J-type electrode (Ir/Ir)
- ▶ Recommended for natural gas/special gas

P/N ICPB432 (MOTORTECH)



Spark Plugs (M14x1.25 Thread Size – 0.500 in. Thread Reach)

- ▶ Fine wire electrode (Au/Pd)
- ▶ Recommended for natural gas

P/N RL85G (CHAMPION®)

Equivalent to:
CATERPILLAR® P/N 2N-0553, 7H-6959

Optional:

- ▶ J-type electrode (Ir/Pt)
- ▶ Recommended for natural gas

P/N GN3-1 (DENSO®)

- ▶ For use with integral ignition coils
- ▶ Fine wire electrode (Au/Pd)
- ▶ Recommended for natural gas

P/N RTL85G (CHAMPION®)

Equivalent to:
CATERPILLAR® P/N 9Y-3985

Optional:

- ▶ J-type electrode (Ir/Ir)
- ▶ Recommended for natural/special gas

P/N ICPB412 (MOTORTECH)

SPARK PLUGS & ACCESSORIES



Tools

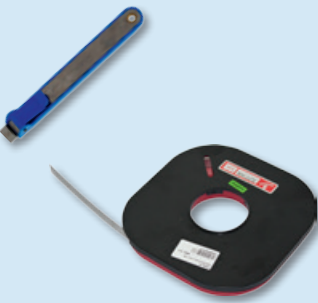
- ▶ Spark plug gap setting tool
- ▶ For easy setting of spark plug gaps
- ▶ Basic kit includes M14x1.25 thread adaptor

P/N 07.98.120-14



- ▶ Accessory kit for J-type spark plugs
- ▶ Including base insert and feeler gauge

P/N 07.98.122-A



Optional:

P/N 07.98.037

- ▶ Feeler gauge clamp

P/N 07.98.059

- ▶ Feeler gauge, gap 0.008 in./0.20 mm

P/N 07.98.034

- ▶ Feeler gauge, gap 0.010 in./0.25 mm

P/N 07.98.035

- ▶ Feeler gauge, gap 0.012 in./0.30 mm

P/N 07.98.036

- ▶ Feeler gauge, gap 0.014 in./0.35 mm



- ▶ Spark plug cleaning kit
- ▶ Removes oil residues and deposits in the electrode area by high pressure
- ▶ Special blasting grit for gentle cleaning of the electrode and thread area

P/N 44.01.023



- ▶ Extended barrel magnetic spark plug sockets
- ▶ 1/2 in. drive
- ▶ 12 in. length

P/N 07.99.022-2-12

hex 15/16 in. – for use with 4W-2256, 9Y-3985

P/N 07.99.022-4-12

hex 13/16 in. – for use with 2N-2839, 2N-0553, 7H-6959



- ▶ Torque wrench
- ▶ 1/2 in. drive

P/N 07.98.065

SPARK PLUGS & ACCESSORIES

- ▶ Seat & thread reconditioners
- ▶ M14x1.25 thread size

P/N 07.98.114-12

1/2 in. thread reach

P/N 07.98.114-34

3/4 in. thread reach



Quick and comfortable monitoring on a running engine makes it possible to detect:

- ▶ Wear of spark plugs
- ▶ Failure of the ignition system (damaged ignition coil, spark plug lead or ignition controller)
- ▶ Faulty compression of a cylinder

P/N 06.90.099-100



Accessories

- ▶ Spark plug gaskets
- ▶ For M14x1.25 thread size
- ▶ Pack of 100 pcs.

P/N 02.85.015-100



- ▶ Gaskets for integral ignition coil spark plugs
- ▶ Copper
- ▶ Pack of 100 pcs.

P/N 75.90.295-100



- ▶ Thread lubricant
- ▶ Can 4 oz/115 g

P/N 07.98.718



Coolant Filtration

- ▶ Bypass filters with stainless steel filter elements
- ▶ Cleans and maintains coolant system from rust and contaminants
- ▶ Increases water pump life and cylinder head efficiency
- ▶ Easy to install and to service



P/N 25.00.009-50

Features:

- 9 in. element length
- 50 micron element
- Flow indicator

P/N 25.00.009-50-30

Features:

- 9 in. element length
- 50 micron element
- Flow indicator
- 30 in. stand

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Distribution partner for DENSO spark plugs



-  Headquarter
-  Office
-  Sales Partner

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