

North American 4055 Direct Spark Igniters for Selected Gas Burners

Bulletin 4055

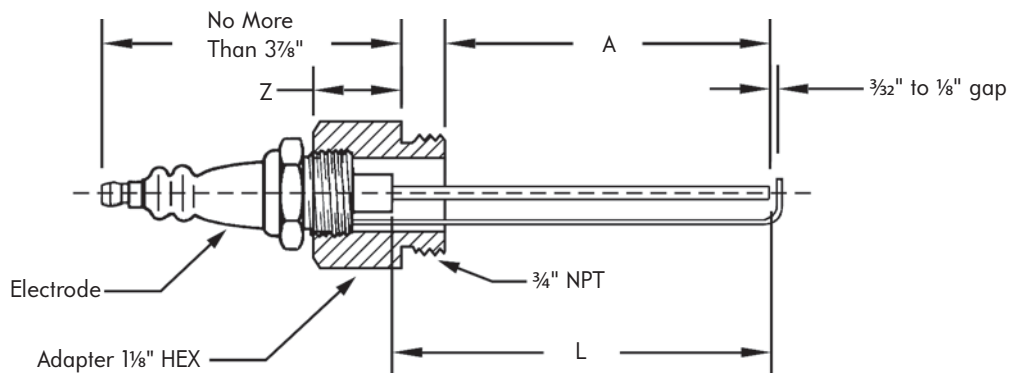
North American gas burners listed below can be lit directly with 4055 Igniters (as an alternate to gas pilot or manual torch lighting).

4422, 4423, 4424, 4425, 4575, 4828, 4831, 4832, 4833, 4836, 4837

Factory Mutual's restrictions on direct electric ignition are:

- (a) 5-second maximum trial for ignition.
- (b) Burner must have low fire start.
- (c) Only one trial for ignition, then manual reset (no automatic recycle).

Standard 6000 volt transformers and ignition cables are used with these igniters. Spark should be shut off after lighting. North American and other flame supervision systems can be designed for direct spark ignited burners, using a standard detector to monitor the main flame.



4055-A-B-C-D-E DIMENSIONS and SPARE PARTS

Designation	"A" Dimension	"L" Dimension	"Z" Dimension	Electrode	Adapter
4055-A	1"	1 7/32"	1 3/16"	4-7865-2	OA4-1790-1
4055-B	2 3/8"	3 3/32"	1 23/32"	4-7865-1	OA4-1790-2
4055-C	2 7/8"	3 3/32"	1 3/16"	4-7865-1	OA4-1790-1
4055-D	1 1 1/16"	1 29/32"	1 3/16"	4-7865-3	OA4-1790-1
4055-E	1 7/8"	2 3/32"	1 3/16"	4-7865-4	OA4-1790-1

4055-A-B-C-D-E APPLICATION SIZING GUIDE

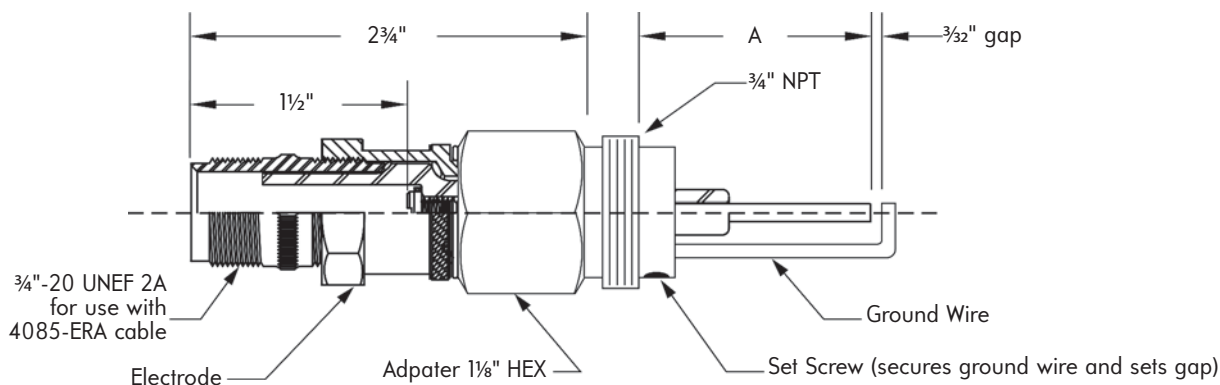
Burner designation	Igniter designation	Burner designation	Igniter designation
4422-2 thru -6-B	4055-D	4831-0 and -1	4055-A
4422-7 and -8	4055-B	4832-2 thru -4	4055-C
4423-0, 4424-0	4055-D	4832-5 thru -7	4055-B
4423-1 thru -3	4055-C	4833-3 and -4	4055-C
4424-1 thru -3	4055-C	4833-5 thru -8-A	4055-B
4425-2 thru -6-B	4055-D	4836-2 thru -4	4055-C
4425-7 and -8	4055-B	4836-5 thru -8	4055-B
4575-8 thru -14	4055-E	4837-3 and -4	4055-C
4828-5 thru -8	4055-B	4837-5 thru -8-A	4055-B

EXPLOSION RESISTANT ASSEMBLY (ERA) IGNITERS

ERA igniters are intended for use in systems that require sealed ignition wiring. They have a 3/4"-20 threaded igniter connection for sealed aircraft type ignition wiring, and are intended for Class 1 Div. 2 applications. Although the wiring method used between the ignition transformer and the spark plug was designed and chosen to be suitable for use in Zone 2 hazardous locations, it DOES NOT carry certifications or third party approvals. Standard 6000 volt transformers and 4085-ERA ignition cables are used with these igniters. Spark should be shut off after lighting.

3/4" NPT 4055 ERA IGNITERS

4055-A-B-C-D-E-ERA igniters have a 3/4" NPT threaded connection and are intended for use in systems that require sealed ignition wiring that normally accept the 4055 igniters. The "A" dimension is the same as the regular 4055 igniters. The adapter and set screw is made from stainless steel and the ground wire is a high Nickel alloy. See the application sizing guide on page 1 for the list of burners that can be lit directly with 4055-ERA igniters.



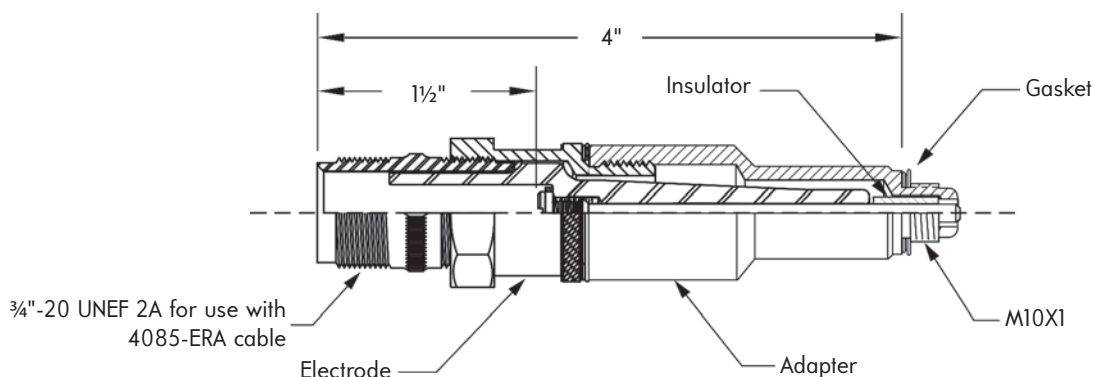
4055-A-B-C-D-E ERA DIMENSIONS and SPARE PARTS

Designation	"A" Dimension	Electrode	Ground Wire	Adapter	Set Screw
4055-A-ERA	1"	4-54882-1	4-58932-1	4-54896-1	R776-1400-S
4055-B-ERA	2 3/8"	4-54882-2	4-54892-2	4-54896-1	R776-1400-S
4055-C-ERA	2 7/8"	4-54882-3	4-54892-3	4-54896-1	R776-1400-S
4055-D-ERA	1 1/16"	4-54882-4	4-54892-4	4-54896-1	R776-1400-S
4055-E-ERA	1 7/8"	4-54882-5	4-54892-5	4-54893-1	R776-1400-S

10 MM ERA IGNITERS for PILOT TIPS

The 4055-X-ERA 10mm igniter is intended for use in pilot systems that require sealed ignition wiring that normally accept the R240-2465 10mm spark plug. The 4055-X-ERA is supplied with one (1) **R290-3100**: 10mm spark plug gasket. The ground rod/adapter is made from a high Nickel alloy. The North American gas pilot tips listed below can be lit directly with 4055-X-ERA igniters.

4011 PILOT SETS, 4014, 4015, 4020, 4021, 4024, 4025, 4027

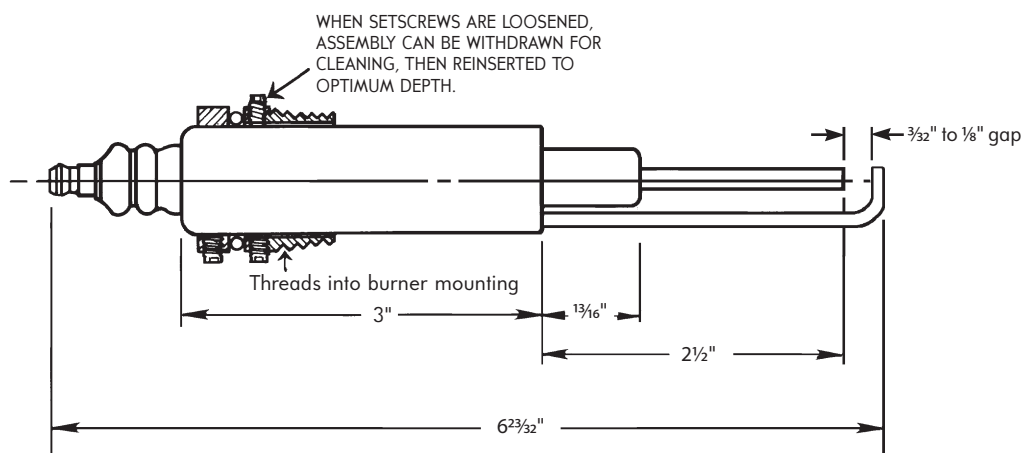


SPARE PARTS

Designation	Electrode	Adapter	Insulator	Gasket
4055-X-ERA	4-54882-6	4-54884-1	4-54883-1	R290-3100

OIL BURNERS

Direct spark ignition of oil flames can be a problem due to tendencies of an oil fire to coat the electrode with carbon. Electrode position relative to the flame is more critical than with gas. The 4055-M Direct Spark Igniter has worked in some cases on oil. Its setscrew arrangement facilitates varying the electrode length to determine the most effective depth, also allows easy removal for cleaning.

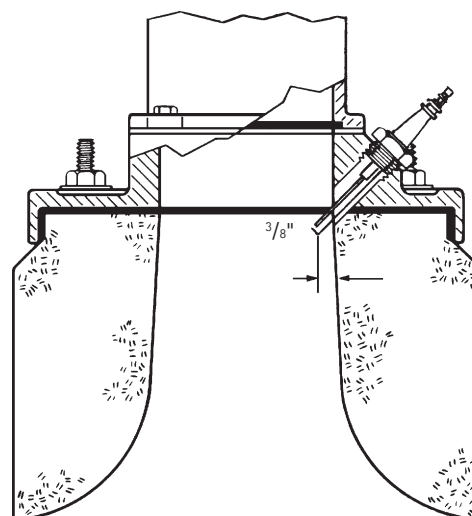


SPARE PARTS

Designation	Adapter	Electrode
4055-M	4-45311-1	16-4202-4

FLAT FLAME BURNERS

Direct spark ignition has been tested on 4832 and 4836-2 through -7 with good results. Mount 4055 Igniter in 3/4" (NPT) hole designated for gas pilot. The electrode must be positioned with the gap 3/8" past the inside face of the tile. In this position, it does not overheat. (See page 1 for proper igniter designation.)



To order, specify: 4055-(designate letter A, B, C, D or E) Direct Spark Igniter.

Example: 4055-A Direct Spark Igniter

DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC. IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., is inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.