

## CPSC Meeting Log: National Electrical Manufacturers Association (NEMA)

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<b>CPSC Attendees</b>	Commissioner Mary Boyle Eva Caldera
<b>Date of Meeting</b>	December 4, 2023
<b>Date of Log Creation</b>	December 6, 2023
<b>Log Creator</b>	Jacob Murray

<b>ATTENDEES</b>	<b>AFFILIATION</b>
Karin Moore	NEMA
Stephen L. Gordon Jr.	NEMA
Gretchen Lange	Lincoln Electric
Todd Kookan	Lincoln Electric (NEMA)
Tina Chan Gonzalez	Miller Electric
Bruce Albrecht	Miller Electric (NEMA)
Cheri Falvey	Crowell & Moring LLP (NEMA)
Jessica Gilbert	Crowell & Moring LLP (NEMA)
<b>DIAL-INS</b>	<b>AFFILIATION</b>
Dane Pedersen	Bracewell

### MEETING NOTES:

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The meeting consisted of a presentation of the Power Point below.

# CPSC Meeting

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Arc Welding Subcommittee of NEMA

December 4, 2023



## Agenda

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- Introductions
- Arc Welding Equipment
  - What it is and Intended Industrial Use
  - Why this is Important to the NEMA Members
- Discussion of Proposed Definition to Delineate Consumer Products from Industrial



## Introductions

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- Cheryl Falvey and Jessica Gilbert, Crowell & Moring
- Karin Moore, Senior Vice President, General Counsel, and Corporate Secretary, National Electrical Manufacturers Association (NEMA)
- Stephen Gordon, Director, Government Affairs, NEMA
- Tina Chan Gonzalez, Associate General Counsel, Miller Electric
- Bruce Albrecht, Vice President, Innovation, Chief Technology Officer, Miller Electric and NEMA Arc Welding Subcommittee Chairman
- Gretchen Lange, Associate General Counsel, Litigation, Lincoln Electric
- Todd Kookan, Lincoln Electric, Member NEMA Arc Welding Subcommittee

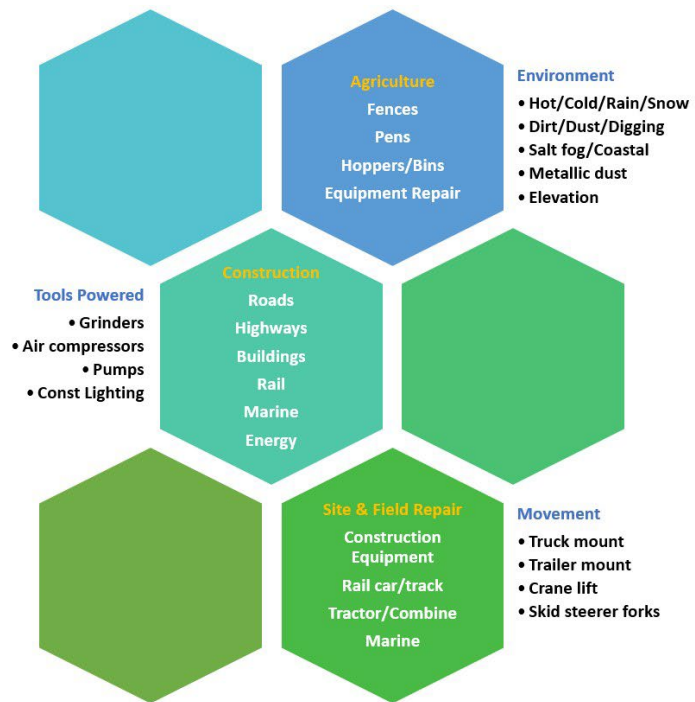


## Arc Welding Equipment

What it is and how it is used



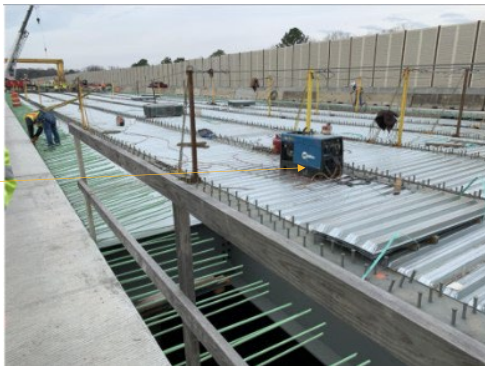
## Engine Driven Welder Ecosystem



## Arc Welders: Use in Construction and Infrastructure

- Engine Driven Welders are first in & out on construction of structural iron buildings that do not yet have a power.
- Welds are performed to the American Welding Society D1.1 Structural Welding Code and inspected by a CWI.

Set down  
by crane  
using lift  
eye



Pulled  
in by  
truck  
using  
trailer  
hitch



- Used in locations where it is impractical to have utility power such as construction of bridges, highways. Authorities Having Jurisdiction prohibit power on the ground - ANSI Z49.1. Lower voltage lighting can be powered while three shifts are used while erecting the structural iron.



## Arc Welders: Use in Agriculture

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- Used to quickly deploy repair resources for on site repair in hard to reach locations in agriculture but also rail, construction, maintenance and marine equipment.



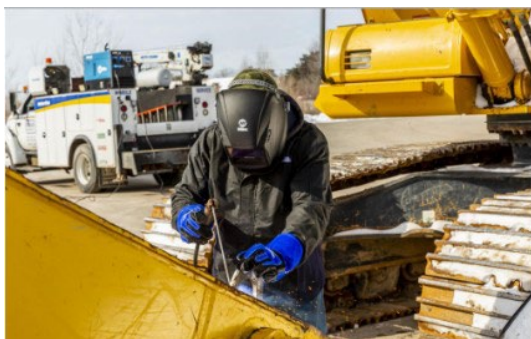
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## Auxiliary Power Assists Multiple Welding Operations

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- Auxiliary power has an industrial purpose to run tools to create strong, “code -compliant” welds, and keep the site dry and well lit, among other things.

Welding



Grinding



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## Engine Driven Arc Welders

- Auxiliary power has an industrial purpose to run tools to create strong, compliant welds, and keep the site dry and well lit, among other things.

Lift eye for crane placement

Holes for industrial fork lift



Grinder

Photo 1: Typical Welding Application with a Grinder Attached with Auxiliary Power



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Miller Electric Spark-ignited Engine-driven Welder Portfolio

Category	Small Frame			Large Frame						Large Frame with Air Compressor	
Brand Model	Hobart Champion 145	Miller Fusion 185	Miller Blue Star 185	Hobart Champion Elite 225	Miller Bobcat 225	Miller Bobcat 260	Miller Bobcat 260	Miller Trailblazer 325	Miller Trailblazer 325	Miller Bobcat 200 Air Pak	Miller Trailblazer 302 Air Pak
Go-To-Market	Retail	-	-	Retail	-	-	-	-	-	-	-
Primary Channel	-	GAWDA	GAWDA	GAWDA (Select Dist.)	GAWDA	GAWDA	GAWDA	GAWDA	GAWDA	GAWDA	GAWDA
Secondary Channel	-	-	-	-	-	Uplifter (Work Truck)	Rental	-	Rental	Uplifter (Work Truck)	-
Engine	Briggs & Stratton Single Cylinder Gasoline Carb - Manual Choke	Kohler Single Cylinder Gasoline Carb - Manual Choke	Kohler Single Cylinder Gasoline Carb - Manual Choke	Kohler Twin Cylinder Gasoline Carb - Manual Choke	Kohler Twin Cylinder Gasoline Carb - eChoke	Kohler Twin Cylinder Gasoline Carb - eChoke	Kohler Twin Cylinder LP Carb - Manual Choke	Kohler Twin Cylinder Gasoline Carb - eChoke / EFI	Kohler Twin Cylinder LP Carb - Manual Choke	Kohler Twin Cylinder Gasoline EFI	Kohler Twin Cylinder Gasoline Carb - Manual Choke
Output	4.5KW Peak 4KW Continuous	6.5KW Peak 6.2KW Continuous	6.5KW Peak 6.2KW Continuous	11KW Peak 9.5KW Continuous	11KW Peak 9.5KW Continuous	11KW Peak 9.5KW Continuous	10.5KW Peak 9KW Continuous	12KW Peak 10.5KW Continuous	11.5KW Peak 10KW Continuous	8KW Peak 6.5KW Continuous	13KW Peak 11KW Continuous
Auxiliary Power Weld (Max Amps)	145	185	195	225	225	260	245	325	305	210	300
Dimensions	24.8 x 20.6 x 31.3 in (629 x 524 x 794 mm)	24.8 x 20.6 x 31.3 in (629 x 511 x 794 mm)	24.8 x 20.6 x 31.3 in (629 x 524 x 794 mm)	28 x 20 x 41 in (711 x 508 x 1041 mm)	28 x 20 x 40.5 in (711 x 508 x 1029 mm)	28 x 20 x 40.5 in (711 x 508 x 1029 mm)	28 x 20 x 40.5 in (711 x 508 x 1029 mm)	26.5 x 20.1 x 37.0 in (673 x 511 x 941 mm)	26.5 x 20.1 x 37.0 in (673 x 511 x 941 mm)	24.25 x 20 x 44.61 in (616 x 508 x 1133 mm)	28 x 20 x 59.625 in (886 x 508 x 1514 mm)
Weight	222 lb (101 kg)	242 lb (110 kg)	296 lb (134 kg)	490 lb (222 kg)	485 lb (220 kg)	501 lb (227 kg)	501 lb (227 kg)	460 lb (209 kg)	460 lb (209 kg)	514 lb (233 kg)	771 lb (350 kg)
Selling Price	MSP	\$2,504	\$5,315	\$5,375	\$4,965	\$6,579	\$7,519	\$10,705	\$9,089	\$8,925	\$17,239
											\$20,339



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Product Name	Building 5500	Outback 145	Outback 185	Eagle 10,000 Plus (LE Engine)
Part #	K2708-2	K2707-2	K2706-2	K2343-4
MSRP (USD)	\$1,674	\$5,039	\$5,354	\$5,669
Applications	Maintenance and Repair, Ranch/Farm	Contractors, Maintenance and Repair, Ranch/Farm	Service Trucks, Fence contractors, Maintenance Crews, Farmers, Ranchers	Construction contractors, Maintenance crews, Farmers, Ranchers
Generator Power Type	AC	AC	AC	AC
Generator Power Voltage	120/240V	120/240V	120/240V	120/240V
Generator Power Hertz	60	60	60	60
Generator Power Phase	1	1	1	1
Continuous Generator Power (kW)	4,400	4,250	5,000	9,500
Peak/Surge Generator Power (kW)	5,500	4,750	5,700	10,500
Welding Process	SMAW	SMAW	SMAW	SMAW
CC Rated Welding Output	100A DC/25V/60%	100A DC/25V/60%	130A DC/25V/60%	210A/25V/100%
CV Rated Welding Output	-	-	-	-
CC Output Range	70 - 140 A	50 - 145 A	50 - 185A	40 - 225A
Engine Type	Kohler CH355	Kohler CH355	Kohler CH440	Lincoln Electric OHV750
Horse Power @ Speed (RPM)	8.9 HP @ 3,600 RPM	8.9 HP @ 3,600 RPM	14 HP @ 3,600 RPM	22 HP @ 3,600 RPM
Engine Displacement (cu. in.)	16.9	16.9	26.2	45
Engine Cylinder(s)	1	1	2	2
Engine Cycle	4	4	4	4
Cooling Type	Air	Air	Air	Air
Ignition Type	Manual, Recoil Start, Manual Choke	Manual, Recoil Start, Manual Choke	Electric Start with Recoil Start, Manual Choke	Electric Start, Manual Choke
Engine Fuel Type	Gas	Gas	Gas	Gas
Fuel Capacity (Gal)	1.9	6.86	6.8	12
Oil Capacity (Qt)	1.2	1.2	1.2	1.6
Full Load Operating Speed (RPM)	3,600	3,600	3,600	3,600
High Idle Operating Speed (RPM)	3,750	3,750	3,750	3,700
Low Idle Operating Speed (RPM)	-	-	2,250	2,200
Fuel Consumption @ Full Load (gal/hr)	0.74	0.62	1.09	1.30
Fuel Consumption @ High Idle (gal/hr)	0.31	0.30	0.45	0.50
Fuel Consumption @ Low Idle (gal/hr)	-	-	0.22	0.40
Design	Tube Frame	Tube Frame	Tube Frame	Enclosed
Height (in)	25.6	25.6	25.6	29.9
Width (in)	21.8	21.8	21.8	21.5
Depth (in)	21.5	21.5	21.5	42.3
Weight (lbs)	198	234	295	514



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Product Name	Eagle 10,000 Plus	Ranger 225	Ranger 250 GXT	Ranger 260MPX	Ranger 305 G
Part #	K2343-3	K2657-1	K2382-4	K3456-3	K3728-5
MSRP (USD)	\$5,999	\$5,999	\$7,509	\$7,339	\$9,029
Applications	Construction contractors, Maintenance crews, Farmers, Ranchers	Construction, Maintenance and Repair, Rental/Service Truck, Ranch/Farm	Construction, Maintenance and Repair, Rental/Service Truck, Ranch/Farm	Construction, Maintenance and Repair, Service Truck	Construction, Maintenance and Repair, Rental, Service Truck
Generator Power Type	AC	AC	AC	AC	AC
Generator Power Voltage	120/240V	120/240V	120/240V	120/240V	120/240V
Generator Power Hertz	60	60	60	60	60
Generator Power Phase	1	1	1	1	1
Continuous Generator Power (kW)	9,500	10,500	10,000	9,500	9,500
Peak/Surge Generator Power (kW)	10,500	10,500	11,000	10,000	12,000
Welding Process	SMAW	SMAW, TIG, MIG, Flux-Cored	SMAW, TIG, MIG, Flux-Cored	SMAW, TIG, MIG, Flux-Cored	SMAW, TIG, MIG, Flux-Cored
CC Rated Welding Output	210A/25V/100%	210A/25V/100%	250A/25V/100% (AC & DC)	260A/26V/100%	300A/25V/100%
CV Rated Welding Output	-	200A/20V/100%	250A/25V/100%	260A/26V/100%	300A/25V/100%
CC Output Range	40 - 225A	40 - 225A	50 - 250A	55 - 260A	50 - 300A
Engine Type	Kohler OHV Command CH730	Kohler OHV Command CH730	Kohler OHV Command CH730	Kohler OHV Command CH730	Kohler OHV Command CH730
Horse Power @ Speed (RPM)	23 HP @ 3,600 RPM	23 HP @ 3,600 RPM	23 HP @ 3,600 RPM	23.5 HP @ 3,600 RPM	23 HP @ 3,600 RPM
Engine Displacement (cu. in.)	44.2	44.2	44.2	44.2	44.2
Engine Cylinder(s)	2	2	2	2	2
Engine Cycle	4	4	4	4	4
Cooling Type	Air	Air	Air	Air	Air
Ignition Type	Electric Start, Manual Choke	Electric Start, Manual Choke	Electric Start, Manual Choke	Electric Start, Manual Choke	Electric Start, Manual Choke
Engine Fuel Type	Gas	Gas	Gas	Gas	Gas
Fuel Capacity (Gal)	12	12	12	11	12
Oil Capacity (Qt)	2	2	2	2	2
Full Load Operating Speed (RPM)	3,500	3,500	3,500	3,600	3,500
High Idle Operating Speed (RPM)	3,700	3,700	3,700	3,650	3,700
Low Idle Operating Speed (RPM)	2,200	2,200	2,400	2,400	2,400
Fuel Consumption @ Full Load (gal/hr)	1.50	1.50	1.74	1.80	1.70
Fuel Consumption @ High Idle (gal/hr)	0.90	0.90	1.00	1.00	1.00
Fuel Consumption @ Low Idle (gal/hr)	0.40	0.40	0.40	0.40	0.40
Design	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
Height (in)	29.9	29.9	29.9	28.0	29.9
Width (in)	21.5	21.5	21.5	20.0	21.5
Depth (in)	42.3	42.3	42.3	36.0	42.3
Weight (lbs)	514	514	602	446	510



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## Differences between Engine Driven Arc Welders and Portable Generators

	Engine-Driven Welders	Portable Generators
<b>MSRP</b>	\$2,500 to \$9,700 (largest volume of units sold is in the range of \$7,000 - \$7,500)	Largest volume of units sold is around \$1,000 <sup>13</sup>
<b>Use Environments</b>	<p>Job sites with extreme elements (high temperature (-20 degrees C to +40 degrees C)/humidity/salt/fog/dust/debris)</p> <p>Not compatible with CO sensor to the use environment at job sites, EMI, welding gasses, and grinding dust</p> <p>Welding equipment is not designed to meet home noise ordinances</p>	<p>Residential without extreme elements</p> <p>Compatible with CO sensor</p> <p>Some portable generators often need to meet local ordinances on noise</p>
<b>End Markets</b>	<p>Construction</p> <p>Maintenance and repair</p> <p>Farm and ranch</p>	Home use for emergency power
<b>Portability</b>	Approximately 200 pounds up to 700 pounds	Typically, 50 – 250 pounds
<b>Design Standard and Scope</b>	<p>ANSI/IEC 60974-1: Industrial and professional welding power sources that are not intended for use by laymen in residential settings</p> <p>ANSI/IEC 60974-6: Welding power sources not exceeding 7.5 kVA for use by laymen in residential sources</p>	<p>ANSI/PGMA G300: Portable generators intended for multiple uses and movability (engine driven welding power sources are expressly excluded from the definition of portable generator)</p> <p>UL 2201 scope only includes portable generators (no reference to engine-driven welders)</p>
<b>Units sold</b>	Significantly lower volume than portable generators	Approximately 2.1 million units per year. <sup>14</sup>



## Discussion of Revised Exemption and Definition





## Proposed Exemption

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- Embraces the existing OSHA and EPA regulatory schemes for commercial/industrial welding products
  - OSHA requires that welding power sources be “listed and labeled” after NRTL testing
- Allows for an exclusion for industrial arc welding products
  - Covers only industrial engine-driven welding equipment certified by an NRTL to UL 551, CSA 22.2 Specification 60 or ANSI/IEC 60974-1, and
  - Using an engine rated under EPA’s 40 CFR 1054 rating scheme
- Utilizes existing product labeling readily observable to confirm compliance
  - NRTL certifications are routinely included on product packaging
- Ensures the exclusion does not create a loophole for cheap imports



## Overview of North American Welding Power Source Standards

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- Equipment manufacturers have historically designed and constructed welding power sources to meet U.S. and Canadian standards (UL 551 and CSA C22.2 No. 60, respectively). These standards:
  - Have similar requirements, but are not identical
  - apply to all welding power sources, regardless of user type
  - have not kept up with technological advancements in welding power sources and are being sunset by 2026
- There has been an effort to adopt the more modern international IEC standards and harmonize throughout North America.
  - ANSI/IEC 60974-1 for industrial and professional use was first adopted in 2008 and harmonized throughout North America in 2019
  - ANSI/IEC 60974-6 for use by laymen was first adopted and harmonized throughout North America in 2019



## Why do NEMA Members Certify to Welding Power Source Standards?

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- OSHA requires that all electrical equipment be approved.
  - For a product to be approved, manufacturers must work with a third party Nationally Recognized Testing Laboratory (NRTL) to certify the product and apply the NRTL mark to the product.
  - In a letter from OSHA to NEMA dated March 8, 2010, OSHA stated “29 CFR 1910.399 and its associated provisions require that NRTLs test and certify the components of arc welding equipment, including power sources and wire feeders”.
- Our industrial customers need assurance that our products are safe in the hands of their employees and are capable of reliably “getting the job done” for critical welds on infrastructure.
  - Meeting the requirements of ANSI/IEC 609741 for industrial and professional use assures this.



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## Existing Industrial Standards and Timing

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- To date, arc welding equipment must be certified by a NRTL to UL 551/CSA 22.2 Specification 60 or ANSI/IEC 60974 -1 to meet OSHA’s requirements. After June 30, 2026, industrial equipment manufacturers of engine -driven arc welders must have transitioned to certify to the requirements of ANSI/IEC 60974 -1.
- NEMA has proposed that all current engine driven welders which are NRTL certified be given until June 30, 2026 to meet the applicable EPA Commercial engine requirements. Any new products entering the market after the effective date of the Proposed Rule must be NRTL certified, to ANSI/IEC 60974 -1 and the engine must be compliant with the requirements of the EPA Commercial class.

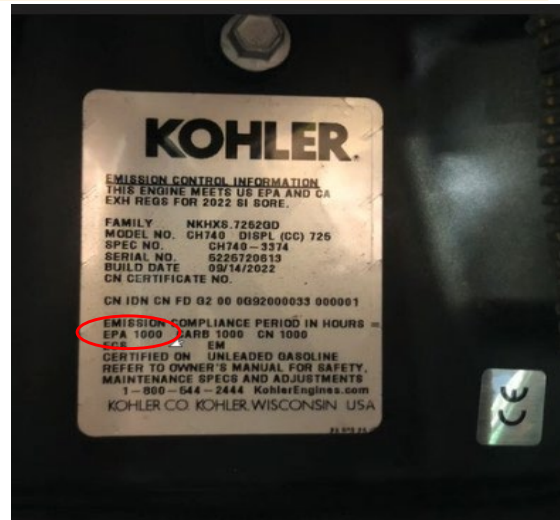


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## EPA Commercial Engine Classifications

Table 1 to § 1054.107—Nominal Useful Life Periods

	Nonhandheld		
	Residential	Extended life residential <sup>1</sup>	Commercial
Class I	125	250	500
Class II	250	500	1,000



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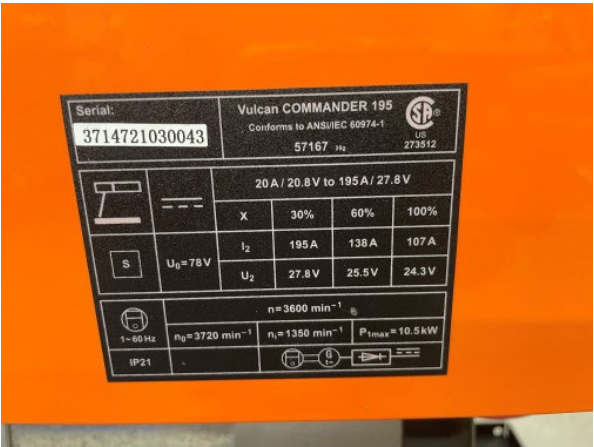
## Practical Effect of the Proposed Exemption

- The following welding power sources would be outside the scope of the rule:
  - Spark ignited engine driven welders certified by a NRTL to UL 551/CSA 22.2 Specification 60 or ANSI/IEC 60974-1 and that by June 30, 2026 also has an EPA commercial engine classification
- The following welding power sources would be in scope of the rule:
  - Spark ignited engine driven welders that are not certified
  - Spark ignited engine driven welders certified to ANSI/IEC 60974-6
  - Spark ignited engine driven welders certified to UL 551 (until June 30, 2026) or ANSI/IEC 60974-1 that do not have an EPA commercial rated engine



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# Practical Effect: Covered by Rule



Thank you

