NABO *NOW*

See Page 13 for NABO Grant Information!

Maintaining Feedwater Control Tubes is Essential to Proper Boiler Maintenance



Early boilers, especially those from the 18 and early 1900's, were inefficient, dangerous, and prone to catastrophic failure due to limited materials, design knowledge, and safety standards.

Early boilers, often used wrought iron and simple fire-tube designs. They had low heat input rates and poor insulation, leading to high fuel consumption and slow heating.

Many were small, hand-fired, and used lump coal, further reducing efficiency.

Boiler explosions were a major risk. Causes included corrosion of critical parts, failure of safety valves, low water levels, and improper maintenance.

Water treatment in these boilers was not an issue; removal of sludge or mud build up were routine.

In modern boilers, treatment of feed water is critical, as problems result from using untreated water in extreme pressure and temperature environments. This includes lower efficiency in terms of heat transfer, overheating, damage, and costly cleaning.

As steam is produce, dissolved solids become concentrated and form deposits inside the boiler. This leads to poor heat transfer and reduces the efficiency of the boiler.

Boiler water must be treated to be efficient in producing steam, as well as preventing

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scaling, and corrosion.

When boiler water evaporates, dissolved salts form a scale on the water wall tubes. Scale acts as an insulator, reducing heat transfer efficiency, increasing fuel consumption, and raising tube wall temperatures, which can lead to overheating and failure.

Untreated and unfiltered boiler feed water allows solids to flow into and through parts of the boiler forming sludge. Build up of solids can block flow paths, reduce heat transfer, and contribute to localized overheating and poor boiler efficiency.

Dissolved oxygen can be caused by several different actions but mainly enters through the feed water system. Dissolved oxygen in boiler water reacts with metal surfaces, causing pitting, a severe and localized form of corrosion that can rapidly weaken boiler components and lead to system failure. Pitting can create small holes in metal surfaces, which may evolve into larger mechanical failures over time.

As steam is produced, dissolved solids become concentrated and form deposits inside the boiler. This leads to poor heat transfer and reduces the efficiency of the boiler.

Chemicals are put into boiler water through the chemical feed tank to keep the water within the chemical range. Proper treatment of boiler feed water is an important part of operating and maintaining a boiler system.

It is recommended that a competent water chemical treatment service be used to maintain the desired chemical balance.

Proper maintenance of the feed water system along with thorough inspections help to eliminate problems in advance.

Leaks and water breaks can introduce undesired residue and oxygen into the feed water system.

The Great Equalizers of Businesses

According to recent economic reports, some of the most common problems associated with operations are still the same old, same old. Despite advancements in technology and strategy, modern companies continue to battle five core challenges:

- Manufacturing costs and inflation
- Acquiring and maintaining skilled workers
- Supply chain disruptions
- Maintenance and overhead
- Worker safety

Although numerous external variables dictate a company's financial health, these foundational issues play a major role in navigating the day-to-day, pass-or-fail margins that plague all companies.

The Domino Effect of Macro Challenges

On their own, macroeconomic forces like inflation and unpredictable supply chain disruptions are largely outside a single company's control. Leaders continually find themselves forced to invent new, creative ways to fill the gaps left by supply deficits while fighting to make ends meet.

However, these factors do not exist in a

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in a vacuum. Each core issue feeds the other in both positive and negative ways, making the search for operational equilibrium a delicate balancing act. For instance, a disruption in parts delivery delays manufacturing, which spikes overhead costs and forces workers into rushed schedules—frequently compromising safety.

Workforce Leadership as the Great Equalizer

While macro factors are volatile, internal workforce management acts as the ultimate stabilizer. Proper supervision and strategic management of skilled laborers directly dictate manufacturing costs. When skilled professionals are paired with strong leadership practices, the positive impact cascades across both operations and routine maintenance.

Investing in human capital yields a powerful compound interest:

- Minimized Downtime: Competent, well-managed teams catch equipment flaws early and execute swift transitions, reducing costly operational pauses.
- Lowered Overhead: Efficient production naturally curbs waste and controls resource drain.
- Enhanced Workplace Safety: When operations run smoothly without frantic, resource-starved rushes, workplace accidents drop significantly.

Ultimately, businesses cannot stop global supply constraints or curb inflation. However, by focusing inward and optimizing the relationship between management, skilled talent, and safety protocols, companies build the operational resilience needed to survive tight margins and thrive in unpredictable markets.

Recall Notices

We do not claim to list all recall notices but highlight the ones we believe to be most pertinent to our members. To view all recalls, visit the Local, State, Federal, and Manufacturing websites.

Jungeblodt · Pressure Equipment/Vessels Recalled



Jungeblodt · Pressure equipment/vessels

Official Recall Summary

This recall and product safety alert covers Pressure valve from Jungeblodt and was published by eu-safety-gate. The notice date in the normalized record is 2025-10-10. The recorded risk

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type is injuries.
The fasteners are not galvanized, and the screw bolts are coated with cadmium. Consequently, at temperatures above 232°C the cadmium-coated fastener could become brittle and break, with resultant leakage. This could cause serious injuries to people next to it. The product does not comply with the requirements of the Pressure Equipment Directive nor with the European standard EN 10204.
Product description: Pressure valve with screw bolts M27x130 mm
Measures
Type of economic operator taking notified measure(s): Manufacturer
Category of measure(s); Recall of the product from end users.

Date of Entry into Force: Unknown
What to Compare Before Buying, Selling, or Listing: Product Identity-Compare the product name, brand category, model, batch, and barcode against the catalog data.
Official Scope: Open the official source notice to confirm affected countries, lots, model variants, remedy steps, and legal recall scope.
Alert Details
Case number: SR/03450/25
Risk Type: Injuries
Model: M27x130
Batch: Not provided
Barcode: Not provided
Notifying Country: Germany
Country of Origin: Germany

Sempell · Pressure Equipment/Vessels Recalled; Injuries Reported



Official Recall Summary
This recall and product safety alert covers Pressure valve from Sempell and was published by eu-safety-gate. The notice date in the normalized record is 2025-10-10. The recorded risk type is Injuries.
Risk: At temperatures above 232°C, the cadmium coating could cause the fastener to become brittle and break, with resultant leakage, which could cause serious injuries to people next to it. The product does not comply with the requirements of

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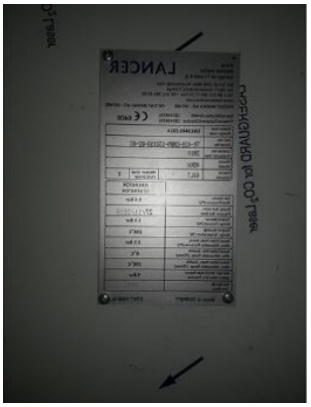
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the Pressure Equipment Directive nor with the European standard EN 10204.
Product description: Pressure valves of various designs for use in power plants and chemical installations. Custom-made to customer specifications.
Measures: Type of economic operator taking notified meanure(s): Manufacturer
Category of Measure(s): Recall of the product from end users.
Date of Entry into Force: 25/06/2025
What to Compare Before Buying, Selling, or Listing:
Product Identity: Compare the product name, brand, category, model, batch, and barcode against the item label or catalog data.
Official Scope: Open the official source notice to confirm affected countries, lots, model variants, remedy steps, and legal recall scope.
Recall Details
Case number: SR/03459/25
Risk type: Injuries
Model: Not Provided
Batch: Not Provided
Barcode: Not Provided
Notifying Country: Germany
Country of Origin: Germany

TRANS MEDIKAL - GETINGE Recalls Steam Generator



Official Recall Summary:
This recall and product safety alert covers Steam generator from TRANS MEDIKAL - GETINGE and was published by eu-safety-gate. The notice date in the normalized record is 2025-05-09. The recorded risk type is burns.
Risk: Due to a manufacturing error, excess pressure can build up in the steam generator and a significant amount of energy could be released resulting in injuries, including burns. The product does not comply with the requirements of the Pressure Equipment Directive.



Product description:
Steam generator integrated into sterilizer.
Measures: Type of economic operator to whom the measure(s) were ordered: Dstributor Category of Measure(s): Recall of the product from end users.
Date of Entry into Force: 02/03/2025

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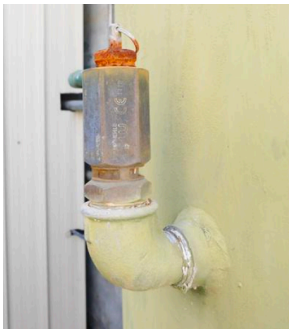
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Date of Entry into Force: 02/03/2025
Type of Economic Operator Taking Notified Measure(s): Distributor
Category of Measures(s): Making the marketing of the product subject to prior conditions.
Date of Entry into Force: 02/03/25
What to Compare Before Buying, Selling, or Listing:
Product Identity: Compare the product name, brand, category, model, batch, and barcode against the item label or catalog data.

Official Scope: Open the official source notice to confirm affected countries, lots, model variants, remedy steps, and legal recall scope.
Risk Details
Case number: OR/000667/25
Risk Type: Burns
Model: 20 kW; 22,5kW; 30kW; 37,5kW; 40 kW; 45 kW; 50 kW; 60 kW
Batch: Not Provided
Barcode: Not Provided
Notifying Country: France
Country of Origin: Türkiye

ATM Instruments Recalls Safety Valve





Official Recall Summary
This recall and product safety alert covers Safety valve from ATM Instruments and was published by eu-safety-gate. The notice date in the normalized record is 2025-05-02. The recorded risk type is Injuries.
Risk: The design of the safety valves does not guarantee reliable protection. Therefore, in case of overpressure



within the equipment on which these valves have been installed, equipment bursting cannot be ruled out, leading to a risk of serious injuries to users nearby The product does not comply with the requirements of the Pressure Equipment Directive. Product description: ATM Instruments safety valves (all models) placed on the market since 30 November 2013, intended to protect equipment from overpressure, for professionals and the general public.

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Measures: Type of economic operator to whom the measure(s) were ordered: Manufacturer Category of Measure(s): Withdrawal of the product from the market. **Date of Entry into Force:** 14/03/2025.
Type of Economic Operator to Whom the Measure(s) were Ordered: Manufacturer Category of Measure(s): Recall of the product from end users. Date of Entry into Force: 14/03/2025. Type of economic operator taking notified measure(s): Other Category of Measure(s): Removal of this product listing by the online marketplace.
Date of Entry into Force: 02/05/2025.
What to Compare Before Buying, Selling, or Listing:
Product Identity: Compare the product name, brand, category, model, batch, and barcode against the item label or catalog data.
Official Scope:
Recall Details
Case number: OR/00065/25
Risk Type: Injuries
Model: Not Provided
Batch: Not Provided
Barcode: Not Provided
Notifying Country: France
Country of Origin: France

Daikin Comfort Technologies Recalls Amana Through-The-Wall Air Conditioners and Heat Pumps Due to Risk of Serious Injury from Fire

Daikin Comfort Technologies Recalls Amana Through-The-Wall Air Conditioners and Heat Pumps Due to Risk of Serious Injury from Fire
Hazard: The snubber circuit can emit flames if it shorts, posing a risk of serious injury due to fire hazard.
Remedy: Consumers should stop using the recalled product immediately and contact Daikin Comfort Technologies Manufacturing, Inc. (DCT) to submit a request for a full refund of the unit.



Consumers will be required to provide their contact information, cut the product's cord, and then upload a photo of the product's serial number and the cut

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cord to receive a full refund of the unit.
Units: About 4,633 (In addition, about 126 were sold in Canada)
Consumer Contact:
Website: https://www.amana-ptac.com/amana-ttw-wrac-recall-2
Phone: (833) 730-0939

Modine Manufacturing Company Recalls Airedale Heating and Cooling Ventilation Fans Due to Fire Hazard



Hazard: The ventilation fan motor in the heat pumps can short circuit if water gets on the circuit board, causing the units to overheat and posing a fire hazard.
Remedy: Consumers should stop using the recalled heat pumps immediately and contact the manufacturing company for written instructions to unplug the recalled ventilation fan or to switch the internal disconnect in the fan to the "off" position. Consumers should contact their Modine Distributor to arrange for their free inspection and service. Service technicians will inspect and repair or replace the recalled heating and cooling OA/EA ventilation fans in all units.
Units: About 6,061 (In additions, about 735 were sold in Canada)
Consumer Contact:
Web: https://www. modine.com/recall
E-mail: ProductSafety@modine.com
Phone: (888) 636-8627

Goal Zero Recalls YETI 3000X Power Stations Due to Serious Risk of Injury from Fire and Burn Hazards



Hazard: The recalled power station's circuit board can overheat, posing a risk of serious injury from fire and burn hazards.
Remedy: Consumers should stop using the power stations immediately and install the free repair in the form of a firmware update available through the Goal Zero application or contact Goal

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Zero for firmware installation at no cost.
Units: About 46,200
Consumer Contact: Website: https://recallsupport.goalzero.com/hc/en-us/requests/new
E-mail: support@goalzero.com
Phone: (888) 794-6250

Workbless Pressure Washers Recalled Due to Risk of Serious Injury or Death from Shock and Electrocution Hazards

Workbless Pressure Washers Recalled Due to Risk of Serious Injury or Death from Shock and Electrocution Hazards
Hazard: The recalled pressure washers lack an integral ground-fault circuit-interrupter (GFI) and an adequate-length power cord, posing serious risks of injury or death from shock and electrocution hazards.
Remedy: Consumers should stop using the recalled pressure washers immediately and contact Workless for a full refund. Consumers will be asked to destroy the pressure washer to srevice@workbless.net. Consumers should then dispose of the destroyed recalled product.
Units: About 2,200 (in addition, about 657 in Canada)



Consumer Contact:
Website: https://workbless.net/recall/
E-mail: service@workbless.net
Phone: (833)725-3151

Greenworks Tools Recalls 24V and 48V Kobalt Yard Power Tools with USB-C Batteries Due to Risk of Serious



Hazard: Charging the lithium-ion batteries through the USB-C port while the batteries are inserted in the yard power tools, can cause the batteries to short-circuit, posing serious injury from fire hazard.
Remedy: Consumers should stop charging the batters with the

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USB-C port while batteries are inserted in the yard power tools immediately and contact Greenworks Tools to receive a free replacement battery. Consumers will be asked to complete the registration form at https://www.greenworkstools.com/pages/kobalt-product-recall to receive replacement batteries without the USB-C port, a charger adapter, a warning label to affix on the yard power tool, an updated product manual, and a pre-paid shipping label along with instructions for returning the recalled batteries.

Units: About 554,780

Consumer Contact:

Website: http://www.greenworkstools.com/pages/product-recall-information

E-mail: recalls@greenworkstools.com

Phone: (888)266-7096

Flaunt Recalls Magsafe Battery Chargers Due to Risk of Serious Injury or Death from Fire and Burn Hazards



Hazard: The lithium-ion battery in the recalled power banks (chargers) can overheat and ignite, posing a risk of serious injury or death from fire or burn hazards.

Remedy: Consumers should stop using the recalled power banks immediately and contact Flaunt for a full refund of the $65 purchase price in the form of a check or as an $80 store credit at flauntcases.com. Consumers will be asked to register at www.flauntcases.com/pages/recall and submit two photographs. One photo should show the front of the power bank with the word, “Recalled,” the consumers initials, and the registration date written on it in permanent marker. The second photo should be the model number E33A located on the back of the power bank. Consumers will receive an email with instructions on disposing the charger in accordance with the local and state regulations.

Note: Do not throw this recalled power bank with lithium-ion battery in the trash, the general recycling stream (e.g., street-level or curbside recycling bins), or used battery recycling boxes found at various retail and home improvement stores. Recalled lithium-ion batteries must be disposed of differently than other batteries because they present a greater risk of fire. Your municipal household hazardous waste (HHW) collection center may accept this recalled lithium-ion battery or device for disposal. Before taking your battery or device to a HHW collection center, contact that office ahead of time and ask whether it accepts recalled lithium-ion batteries. If it

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does not, contact your municipality for further guidance.
Units: About 1,400
Consumer Contact:
Website: http://www.flauntcases.con/pages/recall
E-mail: recall@flauntcases.com

Super Off-Road Solar Power Banks Recalled Due to Overheating; Imported by Spector & Co.



Hazard: The solar power banks's lithium-ion battery can swell and overheat, posing a burn hazard to consumers.
Remedy: Consumers should stop using the recalled power banks immediately and visit spectroandco.com/recall to register for a full refund. The refund will be in the form of a check which will be mailed to consumers. Consumers should dispose of the camera in accordance with local and state regulations.
Note: Do not throw this recalled power bank with lithium-ion battery in the trash, the general recycling stream (e.g., street-level or curbside recycling bins), or used battery recycling boxes found at various retail and home improvement stores. Recalled lithium-ion batteries must be disposed of differently than other batteries because they present a greater risk of fire. Your municipal household hazardous waste (HHW) collection center may accept this recalled lithium-ion battery or device for disposal. Before taking your battery or device to a HHW collection center, contact that office ahead of time and ask whether it accepts recalled lithium-ion batteries. If it does not, contact your municipality for further guidance.
Units: About 7,400 (in addition, about 4,964 were sold in Canada)
Consumer Contact:
Website: https://www. spectorandco.com/us/our-company/recall
E-mail: recall@spectorandco.com
Phone: (888)377-7737

Yamaha Recalls Model Year 2021-2022 Fleet Golf Cars Due to Risk of Serious Injury or Death from a Crash Hazard



Hazard: The recalled golf cars' passenger-side brake cable could have been misrouted during assembly. If the cable was misrouted, abnormal wear can occur which can cause the passenger side cable to break during use, posing a risk of serious injury or death from the crash hazard.

Remedy: Consumers should stop using the recalled fleet of golf cars immediately and contact an authorized Yamaha Golf Car dealer to schedule a free inspection of the passenger-side brake cable routing. If the cable was misrouted, the dealer will replace the cable with a new, properly routed cable. For consumers who cannot take the recalled golf car to an authorized dealer, a Yamaha dealer will provide transportation of the golf car or will inspect and, if necessary , install a new, properly routed cable at the location of the golf car.

Units: About 8,650 (In addition, about 700 were sold in Canada)

Consumer Contact:

Website: https://www.yamahasports.com/Content.php?content=cpsc-recalls

E-mail: ygc_callcenter@yamahamotorsports.com

Phone: (866) 747-4027

Got an important message for your fellow NABO members? Have an announcement that you'd like to share? Send your submissions for the NABO NOW! newsletter to allison.toensing@tuvsud.com

www.nabomembers.com

NABO GRANT PROGRAM

THE PROGRAM

The National Association of Boiler Owners and Operators ("NABO") has established a Grant program to provide for and encourage eligible individuals to continue their education to pass the National Board Examination for boiler and pressure vessel inspectors and to become a National Board Commissioned Inspector.

This Grant program is administered by NABO. All awards are granted without regard to race, color, creed, religion, sexual orientation, gender, disability or national origin.

ELIGIBILITY

Applicants to the NABO Grant Program must be either:

- Children of individuals employed by or affiliated with ARISE Boiler Inspection and Insurance Company Risk Retention Group policyholder companies ("ABIIC");
- Individuals who want to become commissioned boiler inspectors;
- Veterans of the United States Military Services; or
- Individuals with HVAC or Code or Non-Code boiler and pressure vessel manufacturing shop experience as a Welder or Quality Control.
- Must be a citizen of the United States.

ELIGIBLE EDUCATIONAL INSTITUTIONS

An Eligible Educational Institution is any accredited school that has a curriculum to prepare students to pass the National Board Examination to become a National Board Commissioned Inspector. See current National Board requirements here http://www.nationalboard.org/Index.aspx?pageID=390&ID=483

AWARDS

Applications will be reviewed against the program criteria by a selection process determined by NABO. Grant recipients will be selected on a competitive basis. If selected as a Grant Recipient, the student will receive an award in an amount of $10,000 for tuition, books and related fees. Up to two awards will be granted each year. Applicants can reapply for additional awards each year while continuing their education.

APPLICATION

Interested individuals must complete the Application and submit it to:

NABO Grant Program

c/o ARISE Boiler Inspection & Insurance Co. RRG 7000 S.
Edgerton Road, Suite 100
Brecksville, OH 44141
Email: arise-NABO@tuvsud.com

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Applicants are responsible for gathering and submitting all necessary information. Applications are evaluated on the information supplied; therefore, answer all questions as completely as possible. Incomplete applications will not be evaluated. All information received is considered confidential and is reviewed only by the NABO Grant Program Selection Committee.

SELECTION OF GRANT RECIPIENTS

Grant Recipients are selected on the basis of academic record, demonstrated leadership and participation in school and community activities, honors, work experience, statement of goals and aspirations, and a personal interview, if elected by the NABO Grant Program Selection Committee. Financial need is not considered.

Selection of Grant Recipients is made by the NABO Grant Program Selection Committee. All Applicants agree to accept the decision as final.

Grant Recipients will be notified as soon as possible after receipt of the completed application. Not all applicants to the program will be selected as Grant Recipients. Students may reapply to the program each year they meet eligibility requirements.

PAYMENT OF GRANTS

All awards will be paid directly to the Eligible Educational Institution. Grant Recipients will be responsible for all income taxes due on any awards.

OBLIGATIONS

Grant Recipients must keep at least a "C" average in all courses in order to keep the award. If the recipient's grades fall below a "C" average in his or her courses, the Grant Recipient shall be required to repay the award to NABO. Grant Recipients must submit a transcript of courses taken and grades received to the NABO Grant Program Selection Committee at the end of each grading period.

AMENDMENTS AND TERMINATION OF NABO GRANT PROGRAM

NABO reserves the right to review the conditions and procedures of the NABO Grant Program and to make any changes at any time, including termination of the NABO Grant Program.

ADDITIONAL INFORMATION

Questions regarding the NABO Grant Program should be addressed to: NABO

NABO Grant Program

c/o ARISE Boiler Inspection & Insurance Co. RRG
7000 S. Edgerton Road, Suite 100
Brecksville, OH 44141
Email: arise-NABO@tuvsud.com

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NABO Grant Program Application

I, _____ have read and understand the conditions of the NABO grant Program. I affirm that I plan to pursue a career in boiler and pressure vessel inspection and to sit for the National Board Examination to become a National Board Commissioned Inspector. I give permission to officials of my educational institution to release transcripts of my academic record and other information requested for consideration in the NABO Grant Program. I understand that this application will be available only to qualified people who are pursuing a career in boiler and pressure vessel inspection. I affirm the information contained herein is true and accurate to the best of my knowledge and belief.

Date _____ Signature _____

Legal name in full _____
(Print/Type) Last Name First Name M.I.

Permanent residence _____
Number, Street, and Apartment Number

_____
City State ZIP

Your address at school _____
(if different) Number, Street, and Apartment Number

_____
City State ZIP

Home telephone (_____) _____

School telephone (_____) _____
(if different)

E-mail address _____

(Check one) I am a ☐ U.S. citizen ☐ U.S. national ☐ Resident alien expecting citizenship by the date of award

Date of birth _____
Month/Day/Year

Name of Educational Institution _____

Current cumulative GPA _____ on a scale of _____

Your undergraduate major(s)_____

Number of college credits earned to date _____ Total number of credits required for graduation _____

Expected date to receive baccalaureate degree _____ Degree you will receive _____

Graduate degree(s) sought _____ Concentration(s) _____

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Name _____

1. List the secondary school from which you graduated, and all higher education institutions attended.

School	Location	Dates Attended

2. List awards, scholarships, or special recognitions you have received.

3. List college and high school activities

4. List work experience

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Name _____

5. Describe the educational program you intend to pursue if you receive a NABO Grant Award.

6. What are your employment goals?

7. What additional personal information do you wish to share with the NABO Grant Program Selection Committee?

8. Describe your military service, leadership and education, including mechanical or engineering-related training and military application of that training.