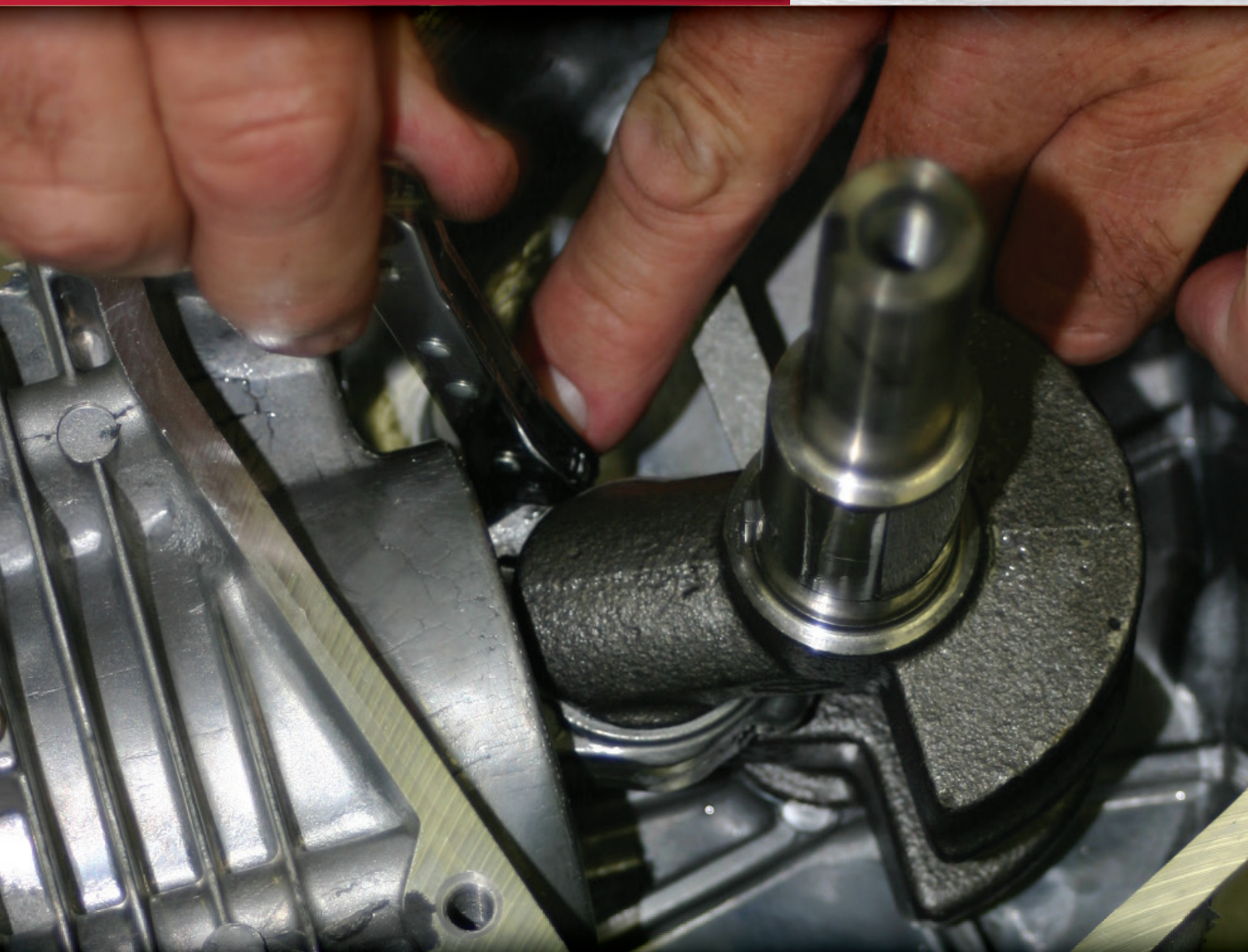




**CUSTOMER EDUCATION**

**2014-2015  
VOCATIONAL EDUCATION  
RESOURCES**

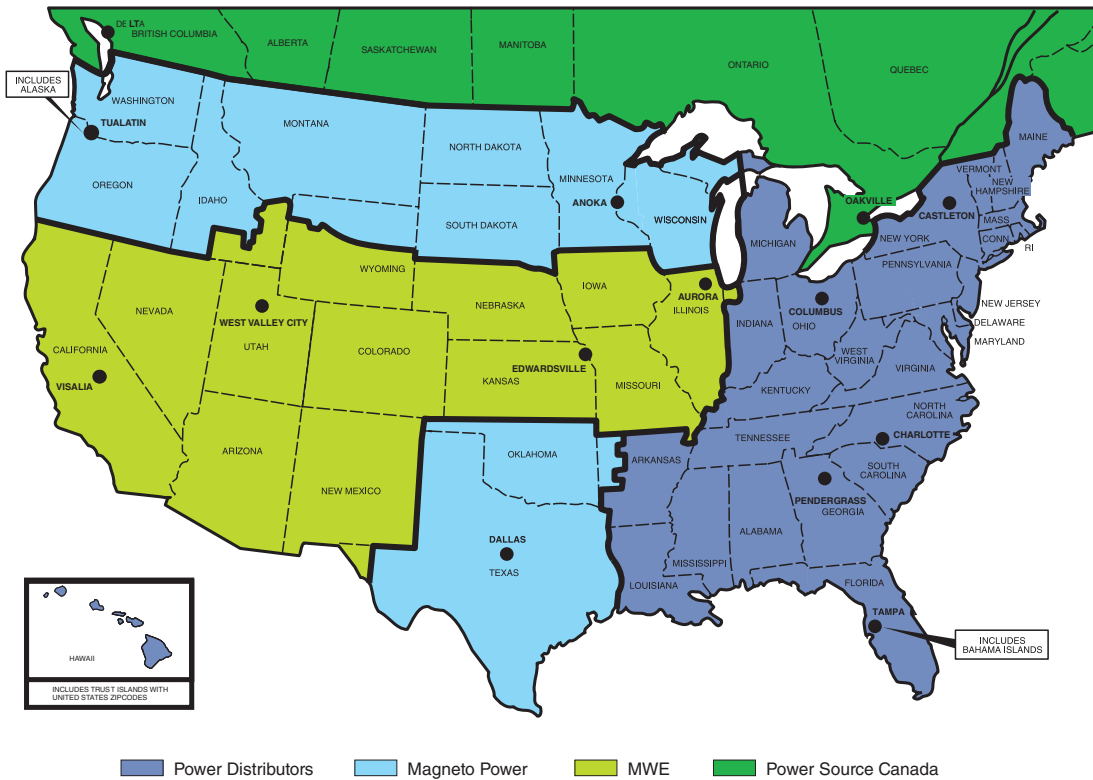


▶ ENGINE TRAINING KITS  
▶ TEXTBOOKS

▶ COURSE OUTLINES  
▶ DVDs, CBTs, POWERPOINTS

▶ INSTRUCTOR TRAINING  
▶ ONLINE SALES CATALOG

# VOCATIONAL EDUCATION CONTACT INFORMATION



10/14

## POWER DISTRIBUTORS

**Atlantic Power**  
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Castleton, NY 12033  
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mikeb@powerdistributors.com

**Central Power**  
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mikeb@powerdistributors.com

**Central Power of Florida**  
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**Mike Blanc** 800-554-3336 ext. 2332  
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## POWER SOURCE CANADA, LTD

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mgulley@powersourcecanada.ca

**Power Source Canada, LTD (Toronto)**  
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Oakville, ON L6H 6X5  
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mgulley@powersourcecanada.ca

## MIDWEST ENGINE WAREHOUSE

**Midwest Engine Warehouse-IL (Chicago)**  
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Aurora, IL 60504  
**Scott St. Clair** 877-505-8633  
st.clair.scott@mwe.net

**Midwest Engine Warehouse-KS (KC)**  
9630 Woodend Road  
Edwardsville, KS 66111  
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st.clair.scott@mwe.net

**Midwest Engine Warehouse-CA**  
7101 W. Doe Avenue  
Visalia, CA 93291  
**Scott St. Clair** 877-505-8633  
st.clair.scott@mwe.net

**Midwest Engine Warehouse-UT (SLC)**  
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West Valley City, UT 84120  
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**Magneto Power, LLC "West" (Portland)**  
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Tualatin, OR 97062  
**Charles Francis** 800-248-4016 ext. 1125  
cfrancis@magnetopower.com

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To order Briggs & Stratton® engine kits, parts, tools and other training materials, refer to the map above and contact our Integrated Distributor (IDN) that handles your region. You may fax, mail or email orders to the IDNs using a purchase order or credit card. Be sure to include a tax-exempt ID number if applicable.

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# **BRIGGS & STRATTON**

## **Educational Philosophy**

**Let us do the work for you!**

Our Training Kits are specifically built for you to use in your classroom and lab. They are designed with an unparalleled level of educational material, aimed at reducing your time spent writing curriculum, creating presentations and lab sheets.

Benefits of using Briggs & Stratton® Training Kits in your classroom may include:

- Materials that are developed with you and the student in mind – our materials make complex issues easier to teach.
- Daily lesson plans will take you through the semester. These were created by working with veteran teachers with years of industry experience.
- Ready to use step-by-step tear down and assembly scripted lab procedures.
- PowerPoint presentation that follows the textbook.
- Engaging video and animations that help clarify difficult concepts and will excite your students' interest.
- Provided tool list takes the guesswork out and reduces your operating cost.
- Over 100 years of experience from the subject-matter experts who literally wrote the book(s) on small engines.
- Keep current with industry and government standards.

Curriculum relevancy becomes increasingly important as your program is being squeezed by inflation and budget cuts. Offering a program in small engines will help reinforce the core educational competencies, Science, Technology, Engineering and Mathematics (STEM) as they are applied in the real world. Some examples include:

- **Science:** How gasoline changes from a liquid to a vapor
- **Science:** Electricity, electron flow, voltage, resistance, AC & DC current, electromagnetism
- **Chemistry:** How gasoline provides heat energy
- **Physics:** Linear and rotary motion
- **Physics:** Torque as a measurement of force
- **Mathematics:** How to measure materials to within .001 inch
- **Mathematics:** Calculating displacement and compression ratios
- **Reading:** How to use repair manuals
- **Technology:** Online learning parts look-up ([www.ThePowerPortal.com](http://www.ThePowerPortal.com))

**Whether you are a first-year instructor or a seasoned expert, Briggs & Stratton has just the right mix of what you need to increase the students' knowledge retention through a multi-media classroom/lab experience.**



- Briggs & Stratton offers soundly structured courses, teaching Air-Cooled Engine Theory and Repair Techniques.
- Over 100,000 engines are already in schools for use in courses relating to Air-Cooled Engine Theory and Servicing.
- Our engine technology materials are used and recognized globally, preparing students for entry to the job market.

The purpose of this catalog is to provide you with information on vocational education courses, teaching aids and training materials, as well as the newest technology available through Briggs & Stratton.

To find more information on the Internet, go to:

### **ThePowerPortal.com**

If you have not already registered for an individual log-in ID, go to [www.thepowerportal.com/register.htm](http://www.thepowerportal.com/register.htm) or scan the 2D code with your smartphone.



Data rates apply.

## **Air-Cooled Engine Industry Opportunities**



Job prospects should be excellent for people who complete formal training programs. Employers prefer mechanics that have knowledge of multiple types of engines and emissions-reducing technology as the government increases regulation of the emissions produced by small engines.

The potential market for service in any one year can be 100 million engines. The need for qualified technicians is enormous. The U.S. Department of Labor's Bureau of Labor Statistics states:

*"As motorized power equipment becomes more sophisticated, employers increasingly prefer to hire mechanics who have completed formal training programs. Employment of outdoor power equipment mechanics is expected to grow 19 percent from 2012 to 2020."*

<http://www.bls.gov/ooh/installation-maintenance-and-repair/small-engine-mechanics.htm>

As engine technology advances and engine power equipment becomes more complex, the skill level of these service technicians also needs to increase. These demands affect future service technicians produced by vocational, trade schools, and high schools. We believe that you, the instructor, along with Briggs & Stratton can meet this challenge.

## ENGINE TRAINING KITS

Briggs & Stratton is the world's largest manufacturer of small air-cooled engines and a leading producer of engine powered equipment like portable and stand-by generators and pressure washers. We are the leader in providing a diverse line of educational training kits to support your programs.

We have many different levels of kits to match your needs. Whether your program is brand new, and you need a starting package, or a seasoned school looking for more advanced material, Briggs & Stratton has the educational materials for you. (Kit contents subject to change without notice.)

Industry advice, ongoing technical support, discounted parts, and engine purchases are available through the Integrated Distributors Network in North America. Information such as parts look-up and service bulletins are available online at [ThePowerPortal.com](http://ThePowerPortal.com).

There are four levels of kits available, all reasonably priced with school budgets in mind:

- **Basic Training Starter Kit** - Provided at no charge by Briggs & Stratton to qualified accounts. Includes one engine and choice of 2 additional training items. See details on page 5.
- **Entry Level Kits** - Contains two engines, textbooks, workbooks, basic tools and instructor's materials.
- **Intermediate Level Kits** - Provide additional resources to supplement the Entry Level Kits or existing programs.
- **Advanced Level Kits** - Contain engines, support materials and/or equipment for providing a complete in-depth program.

CE9028 OHV 900 Series™ Engine Upgrade Module (pg. 8)



CE9039 L-Head 675 Series™ Engine Training Kit (pg. 9)



# Basic Training Starter Kit

## NORTH AMERICA ONLY

This kit is Briggs & Stratton's traditional Engine Donation Program. Once a year, an educational facility may apply for and receive one (1) Briggs & Stratton engine at no charge. In addition to the engine donation you may select any two (2) items from the list below. This kit is supplied by Briggs & Stratton at no cost to the qualifying school.

### To participate, a school must meet all of the following requirements...

1. Have an on-going course in air-cooled gasoline engine theory and/or repair. This course may be either stand-alone or part of a broader curriculum in which air-cooled gasoline engine operation and servicing is a major component.
2. Agree that the no-charge materials supplied by Briggs & Stratton are the exclusive property of the school and are not to be considered as "belonging" to any individual instructor.
3. If the small engine training class is discontinued, the donated items are to be given to another school for the use of education.
4. Welcome any visitation by a Briggs & Stratton representative wishing to review the use of this material.
5. Complete and submit form provided on The Power Portal site along with a course outline.

### Briggs & Stratton's Contribution

If the above criteria are met, you will receive from Briggs & Stratton:

1. One (1) engine of Briggs & Stratton's choice.
2. Two (2) items selected from the list below:  
CE3017 - Basic Engine Systems CD  
CE3056 - Fuel Delivery Systems CD  
CE3070 - 4-Cycle Theory DVD  
MS4185 - Master Parts Catalog  
19368 - Ignition Tester  
CE8155 - Small Engine & Equipment Maintenance (10 per engine donated)  
Repair Manuals (10 per engine donated)

### Annual Renewal Process

Once each year a school may re-apply for the same basic donation package. Renewal is not automatic. The instructor or school administrator must re-submit the required online application/agreement form.

### How to Apply for Kit

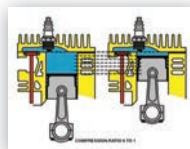
Complete and submit the engine donation application and release of liability form online. Remember to upload a course outline.

*Go to: [ThePowerPortal.com](http://ThePowerPortal.com) - See Educational Resources > Educational Materials for Donation*

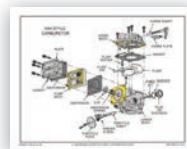
**Note:** Items will be shipped freight prepaid; however, some fees may apply to orders shipped outside the continental United States. Please allow 6 to 8 weeks for delivery.



any 2:



Basic Engine Systems CD



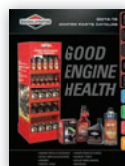
Fuel Delivery Systems CD



4-Cycle Theory DVD



Ignition Tester



Master Parts & Service Tools Catalog



CE8155 - Small Engine and Equipment Maintenance (10 per engine donated)



Repair Manual (10 per engine donated)

*Engine model is subject to availability and may differ from what is shown in the photo.*



# CE9001A OHV 950 Series™ Engine Training Kit (10 Engines)

**ADVANCED KIT - Complete Curriculum for 20 students**



**Updated with new Model 130G00 950 Series™ engines and additional tools and parts**

This complete course curriculum is refined from the Briggs & Stratton Authorized Field Service School, a widely acclaimed small engine training program in the industry. Developed from years of training experience and built around a textbook written by the Briggs & Stratton Customer Education Department, you are assured a thorough, in-depth study of Briggs & Stratton engines. Included with the purchase of this kit is admission to one of our 4-day Vo-Ed Training Courses of your choice at the Briggs & Stratton Customer Education Center in Milwaukee, Wisconsin\*. Once trained with curriculum in place, the instructor

will be able to provide a comprehensive and accurate small gasoline engine program for the students.

New instructors will benefit from having a complete day-to-day lesson plan. For more advanced classes it is relatively simple to construct a custom made program based on your needs from the textbook table of contents or your experiences at the instructor training session. It is beneficial for instructors to have some air-cooled engine or automotive/motorcycle/marine engine experience before attending advanced courses.

Included in this package is a DVD containing video and PowerPoint presentations, and outlines for the instructor to develop competence.

The combination of textbooks, student workbooks, repair manuals and audio/visual training aids allows tremendous flexibility in how to teach various subjects. The extensively illustrated textbook is the "why", the repair manuals the "how" and the workbooks containing the student labs are the "reinforcement."



- \* Please bear in mind that the instructor training offered includes the school and lunch each day. You will be responsible for transportation to/from Milwaukee as well as any incidental costs; hotel cost is included. Transportation from the hotel to Briggs & Stratton will be provided. (See page 25-28 for school dates and an application.) Visit our website to view our list of educational opportunities.

**Note:** Some fees may apply for orders shipped outside the continental United States. Call for information. Expect delivery 3-4 weeks after receipt of order.



# CE9001A OHV 950 Series™ Engine Training Kit Parts List



ITEM	DESCRIPTION	PART #	QTY
Engines	OHV Engine	130G32-0022-F1	10
<b>Support Parts</b>	<b>Engine Gasket Set</b>	<b>591565</b>	<b>10</b>
<b>Support Parts</b>	<b>Crankcase Cover Gasket</b>	<b>590608</b>	<b>30</b>
<b>Support Parts</b>	<b>Head Gasket</b>	<b>591445</b>	<b>30</b>
<b>Support Parts</b>	<b>Ring Set</b>	<b>591452</b>	<b>4</b>
<b>Support Parts</b>	<b>Flywheel Key</b>	<b>222698S</b>	<b>20</b>
Repair Manual	Single Cylinder L-Head Repair Manual	270962	1
Repair Manual	Vanguard™ V-Twin Repair Manual	272144	1
Repair Manual	OHV Single Cylinder Repair Manual (case)	276781	26
Book	Small Engine and Equipment Maintenance Book	CE8155	20
Textbook	Small Engines Textbook	CE8020	20
Workbook	Small Engines Workbook	CE8021	20
Workbook Answer Key	Small Engines Workbook Answer Key	CE8022	1
CD	Basic Engine Systems CD	CE3017	1
CD	Fuel Delivery Systems CD	CE3056	1
DVD	OHV 950 Series™ Engine Instructor's Reference DVD with Lesson Plans and Lab Procedures	CE3137 (pg. 23)	1
DVD	4-Cycle Theory DVD	CE3070	1
DVD	Theories of Operation I DVD	CE3013	1
DVD	Theories of Operation II DVD	CE3029	1
Specialty Tool	Ruler/Air Gap Gauge	CE5121	12
Specialty Tool	Leakdown Tester	19545	2
Specialty Tool	DC Amp Shunt	19468	2
Specialty Tool	Alcohol Tester	795161	5
Specialty Tool	Basic Tool Kit	19300	5
Training	Factory School included with CE9001A Kit purchase	---	1

**Note: Red Bold** items are considered “consumable” and will need to be replenished on a regular basis. These engines are now equipped with metric fasteners.

# CE9028 OHV 900 Series™ Engine Upgrade Module (10 Engines)

The Overhead Valve Upgrade Module is an excellent way for schools with established air-cooled engine programs to upgrade to more modern components.

CE9028 is one of our most popular kits similar to the larger CE9001A kit, but without some of the specialty tools and repair manuals.

- Perfect for schools with an existing small engine program
- Helps schools stay up-to-date with current technology



ITEM	DESCRIPTION	PART #	QTY
Engines	OHV Engine	12S432-0036-F8 (or similar model)	10
<b>Support Parts</b>	<b>Gasket Sets</b>	<b>791797</b>	<b>10</b>
<b>Support Parts</b>	<b>Crankcase Cover Gasket</b>	<b>699485</b>	<b>10</b>
<b>Support Parts</b>	<b>Valve Gasket Kit</b>	<b>791798</b>	<b>10</b>
<b>Support Parts</b>	<b>Flywheel Key</b>	<b>222698S</b>	<b>10</b>
Specialty Tool	Flywheel Puller	19203	3
Specialty Tool	Flywheel Strap Wrench	19433	3
Specialty Tool	Ring Expander	19340	3
Specialty Tool	Piston Ring Compressor	19070	3
Repair Manual	OHV Single Cylinder	276781 (pg. 18)	10
PowerPoint CD	4-Cycle Theory	CE3017 (pg. 24)	1
PowerPoint CD	Fuel Delivery Systems	CE3056 (pg. 24)	1
CD	OHV Engine Instructor's Reference CD with Lesson Plans & Lab Procedures	CE3094 (pg. 23)	1

**Note: Red Bold** items are considered “consumable” and will need to be replenished on a regular basis. These engines are now equipped with metric fasteners.

# CE9039 L-Head 675 Series™ Engine Training Kit (2 Engines)

**ENTRY LEVEL KIT** - One of the most widely used engines for walk-behind lawn mower applications.

CE9039 is designed for schools needing a basic entry-level kit

- Intended for smaller class sizes
- Get hands-on experience with vertical shaft lawn mower engines
- CDs, textbook and workbook to help instructors enhance students' learning experience



ITEM	DESCRIPTION	PART #	QTY
Engines	L-Head 675 Series™ Vertical Engine	126M02-1015-F1 (or similar model)	2
Book	Small Engine and Equipment Maintenance	CE8155 (pg. 16)	6
Repair Manual	L-Head Repair Manuals	270962 (pg. 17)	6
CD	L-Head Engine Instructor's Reference CD with Lesson Plans & Lab Procedures	CE3093 (pg. 23)	1
DVD	4-Cycle Theory DVD	CE3070 (pg. 19)	1
DVD	Theories of Operation DVD	CE3013 (pg. 19)	1
Textbook	Small Engines Textbook	CE8020 (pg. 16)	1
Workbook	Small Engines Workbook	CE8021 (pg. 16)	1
Workbook Answer Key	Small Engines Workbook Answer Key	CE8022 (pg. 16)	1
Specialty Tool	Basic Tool Kit	19300 (pg. 29)	1

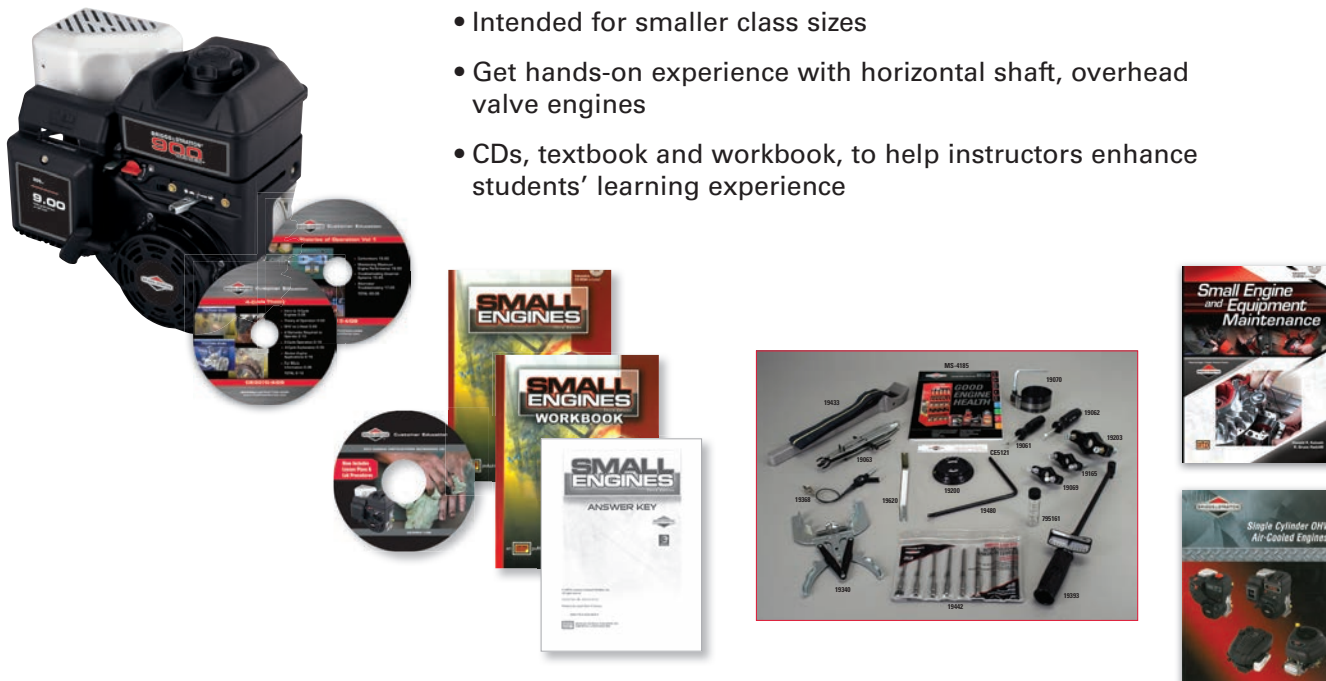


# CE9040 OHV 900 Series™ Engine Training Kit (2 Engines)

Used in generator, pressure washer, roto-tiller and other applications.

CE9040 is also designed for schools needing a basic entry-level kit

- Intended for smaller class sizes
- Get hands-on experience with horizontal shaft, overhead valve engines
- CDs, textbook and workbook, to help instructors enhance students' learning experience



ITEM	DESCRIPTION	PART #	QTY
Engines	OHV Engine	12S432-0036-F8 (or similar model)	2
Book	Small Engine and Equipment Maintenance	CE8155 (pg. 16)	6
Repair Manual	OHV Single Cylinder	276781 (pg. 18)	6
CD	OHV Engine Instructor's Reference CD with Lesson Plans & Lab Procedures	CE3094 (pg. 23)	1
DVD	4-Cycle Theory DVD	CE3070 (pg. 19)	1
DVD	Theories of Operation DVD	CE3013 (pg. 19)	1
Textbook	Small Engine Textbook	CE8020 (pg. 16)	1
Workbook	Small Engine Workbook	CE8021 (pg. 16)	1
Workbook Answer Key	Small Engine Workbook Answer Key	CE8022 (pg. 16)	1
Specialty Tools	Basic Tool Kit	19300 (pg. 29)	1

## CE9041A OHV 950 Series™ Engine Replacement Training Kit (5 Engines)

Use this kit to economically replace engines in the OHV Engine Training Kit CE9001A (pg. 6) or supplement other training kits.



- Includes instructor's DVD with daily lesson plans and lab procedures
- Engine photos
- Teardown script

ITEM	DESCRIPTION	PART #	QTY
Engines	OHV Engine	130G32-0022-F1	5
DVD	OHV 950 Series™ Engine Instructor's Reference DVD with Lesson Plans and Lab Procedures	CE3137 (pg. 23)	1

## CE9047 L-Head 675 Series™ Engine Replacement Training Kit (5 Engines)

This kit can be used for schools that have an existing program for L-Head style engines.



CE9047 enables a school to have a low cost solution to replace worn-out training engines

- Instructor CD to help enhance students' learning experience
- Includes the worldwide industry standard 675 Series™ engine used on many walk-behind rotary lawn mowers
- Engine photos

ITEM	DESCRIPTION	PART #	QTY
Engines	L-Head 675 Series™ Vertical Engine	126M02-1015-F1 (or similar model)	5
CD	L-Head Instructor's Reference CD with Lesson Plans & Lab Procedures	CE3093 (pg. 23)	1

For prices and ordering, see the inside front cover for your regional source of supply contact.

## CE9053 Super-Sized OHV 900 Series™ Engine Replacement Kit (12 Engines)

Replace worn-out engines or expand programs so all students have identical engines to learn the essentials.



CE9053 contains 12 OHV horizontal crankshaft engines that are common in tillers, pressure washers and generators. The kit also includes the CE3094 Instructors CD containing:

- Detailed lesson plans
- Student lab sheets
- PowerPoint of engine disassembly & reassembly
- 4-cycle theory video
- Engine photos for creating your own customized presentation

ITEM	DESCRIPTION	PART #	QTY
Engines	OHV Engine	12S432-0036-F8 (or similar model)	12
CD	OHV Engine Instructor's Reference CD with lesson plans and lab procedures	CE3094 (pg. 23)	1

## CE9054 Super-Sized L-Head 675 Series™ Engine Replacement Kit (12 Engines)

Replace worn-out engines or expand programs so all students have identical engines to learn the essentials.



CE9054 contains 12 L-Head 675 Series™ vertical crankshaft engines; the most popular rotary lawn mower engine in the world. The kit also includes the CE3093 Instructors CD containing:

- PowerPoint of engine disassembly & reassembly
- 4-cycle theory video
- Engine photos for creating your own customized presentation

ITEM	DESCRIPTION	PART #	QTY
Engines	L-Head 675 Series™ Vertical Engine	126M02-1015-F1 (or similar model)	12
CD	L-Head Instructor's Reference CD with Lesson Plans & Lab Procedures	CE3093 (pg. 23)	1



## CE9056 Vanguard™ V-Twin OHV Engine Kit (2 Engines)

The Vanguard™ V-Twin Engine Kit will give you the opportunity to elevate your classroom to an advanced level. It will give your students the chance to discover the working mechanisms of multi-cylinder engines. In addition, they will have the opportunity to understand the refinement of the Vanguard™ brand.



CE9056 is designed to take the more advanced learners to the next level. The V-Twin Engine Kit can give your students a new sophistication of the larger and more powerful engine designs. Get hands-on experience with twin cylinders, pressurized lubrication, electric start and alternators. This kit includes gasket sets, repair manuals and a CD containing:

- PowerPoint engine disassembly and reassembly
- V-Twin teardown script
- V-Twin Model 305447 class outline
- Illustrated Parts List for Model 305447
- Required tool list
- How to look up parts and Operator Manuals
- Oil and fuel recommendations
- And more

ITEM	DESCRIPTION	PART #	QTY
Engines	Vanguard™ V-Twin OHV Engine	305447-0568-F1	2
<b>Support Parts</b>	<b>Gasket Set</b>	<b>841188</b>	<b>4</b>
Repair Manual	Vanguard™ V-Twin OHV Repair Manual	272144 (pg. 17)	4
CD	V-Twin Engine Instructor's Reference CD	CE3125 (pg. 23)	1

**Note: Red Bold** items are considered “consumable” and will need to be replenished on a regular basis. These engines are now equipped with metric fasteners.

# Quick Reference Kit Guide

Item	Description	Part No.	CE9001A	CE9028	CE9039	CE9040	CE9041A	CE9047	CE9053	CE9054	CE9056
Engines	OHV 900 Series™	12S432-0536-F8		10		2			12		
Engines	L-Head 675 Series™	126M02-1015-F1			2			5		12	
Engines	Vanguard™ V-Twin OHV	305447-0568-F1									2
Engines	OHV 950 Series™	130G32-0022-F	10				5				
Support Parts	Engine Gasket Set	591565	10								
Support Parts	Crankcase Cover Gasket	590608	30								
Support Parts	Head Gasket	591445	30								
Support Parts	Ring Set	591452	4								
Support Parts	Flywheel Key	222698S	20	10							
Repair Manual	Single Cylinder L-Head	270962	1		6						
Repair Manual	Vanguard™ V-Twin OHV	272144	1								4
Repair Manual	OHV Single Cylinder	276781	26	10		6					
Book	Small Engine and Equipment Maintenance	CE8155	20		6	6					
Textbook	Small Engines Textbook	CE8020	20		1	1					
Workbook	Small Engines Workbook	CE8021	20		1	1					
Workbook Answers	Small Engines Workbook Answer Key	CE8022	1		1	1					
CD	V-Twin Engine Instructor's Reference	CE3125									1
DVD	Theories of Operation I	CE3013	1		1	1					
CD	Basic Engine Systems	CE3017	1	1							
DVD	Theories of Operation II	CE3029	1								
CD	Fuel Delivery Systems	CE3056	1	1							
DVD	4-Cycle Theory	CE3070	1		1	1					
CD	L-Head Engine Instructor's Reference	CE3093			1			1		1	
CD	OHV Engine Instructor's Reference	CE3094		1		1			1		
DVD	OHV 950 Series™ Engine Instructor's Reference	CE3137	1				1				
Specialty Tool	Basic Tool Kit (see pg. 33 for complete contents)	19300	5		1	1					
Specialty Tool	Ruler/Air Gap Gauge	CE5121	12								
Specialty Tool	Ring Compressor	19070		3							
Specialty Tool	Flywheel Puller	19203		3							
Specialty Tool	Leakdown Tester	19545	2								
Specialty Tool	Ring Expander	19340		3							
Specialty Tool	Flywheel Strap Wrench	19433		3							
Specialty Tool	DC Amp Shunt	19468	2								
Specialty Tool	Alcohol Tester	795161	5								
Training	Vo-Ed Factory School	N/A	1								

# TEACHING AIDS - BOOKS & MANUALS

## CE8020 Small Engines Textbook

## CE8021 Workbook

## CE8022 Workbook Answer Key



Written by the Briggs & Stratton Global Director of Customer Education, Bruce Radcliff, and former Customer Education Manager, Donald Koloski, this textbook has over 350 pages and well over 300 illustrations. It is one of the most detailed theoretical texts available. Already on its third printing, the text is accompanied by a CD-Rom containing quick quizzes, an illustrated glossary, media clips and additional reference material.

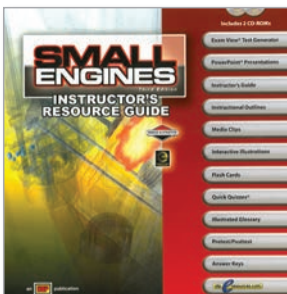
Commonly, manufacturers produce repair manuals which supply the "how-to" for most repair jobs. Few industry or outside publications provide much in the way of "why." *Small Engines* concentrates on the theory of operation relating to all engine systems. Both air-cooled and water-cooled engines are covered.

*Small Engines* is supported by a Student Workbook containing review questions on three different levels addressing the skills and acquired knowledge of beginners, intermediate students and those with advanced capabilities.

The *Small Engines Workbook Answer Key* contains the answers to the lessons provided in the Student Workbook.

Used in Training Kits: CE9001A, CE9039, CE9040

## CE8143 Small Engines Resource Guide



Used in conjunction with the *Small Engines* Textbook and Workbook, this 72-page guide provides the instructor with a turn-key program. The guide follows the chapters from the textbook and provides instructional outlines (competencies), PowerPoint presentations and tests. In addition, you will receive media clips, electronic slides of all the art used in the book, pre- and post-tests and much more. Also included is Test Development software. Use a bank of questions already developed from each chapter or incorporate your own questions. This guide will save a teacher an incredible amount of time in developing his/her program.

## CE8155 Small Engine and Equipment Maintenance



Small Engine and Equipment Maintenance is a comprehensive compilation of small engines and the maintenance practices that are required to maintain the efficiencies and durability of residential and commercial power equipment. The materials have been designed to support and entry-level small engines program and a small engines owner looking to prolong their power equipment investment.

Quick response code technology is incorporated throughout that references easy-to-understand procedures and identifies critical operation components. The learner will reference this well after they leave the classroom.

Used in Training Kits: CE9001A, CE9039, CE9040



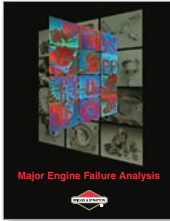


## CE8147 Cutaway Instruction Guide



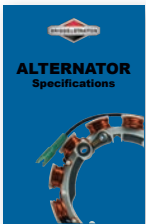
This 88-page book is designed to give any individual looking for basic guidance in making a training prop. The content is limited to a basic approach and requires a clear understanding of hand tools and power tools in a safe and responsible fashion. Your imagination is the only thing that will limit what you can accomplish.

## CE8034 Engine Failure Analysis Book



This 48-page book details the five most common causes of engine failures. A thorough discussion of the "how and why" of each failure along with supporting diagrams and photographs assist the technician in determining engine failures.

## MS2288BK Alternator Specifications



These ring-bound cards supply information on the different alternator systems provided by Briggs & Stratton. An "Introduction" and "How To Use" page is included.

## CE8069 Repair Manual 1919-1981 (Antique Repair Manual)



This manual covers all out-of-production Briggs & Stratton SINGLE CYLINDER engines built in years 1919-1981. From the original model "A" to model series used in 1981, this book has the specifications, diagrams and instructions necessary to restore your "antique" engine to good-as-new condition.

## 270962 Single Cylinder L-Head Repair Manual



For most single cylinder L-Head engines built after 1981. Our best seller - shop manual contains common specifications and detailed, easy-to-follow instructions on how to adjust, tune up and repair. This 350-page manual is used by Authorized Briggs & Stratton Service Centers.

Used in Training Kits: CE9001A, CE9039, CE9047,

## 271172 Twin Cylinder L-Head



For most twin cylinder L-Head engines built after 1981. Manual contains common specifications and detailed, easy-to-follow instructions on how to adjust, tune up and repair. This manual is used by Authorized Briggs & Stratton Service Centers.

## 272144 Twin Cylinder OHV Vanguard™



For Vanguard™ V-Twin OHV engines built after 1981. This 190-page manual is dedicated to Vanguard engines. It is used by Authorized Briggs & Stratton Service Centers. It contains specifications and detailed instructions on how to repair and adjust these types of engines.

For Vanguard™ Single Cylinder Engines use Repair Manual 272147.

Used in Training Kits: CE9001A & CE9056

## 272147 Single Cylinder OHV Vanguard™



For most single cylinder OHV Vanguard™ engines built after 1981. This 280-page manual is now dedicated to Vanguard engines and is used by Authorized Briggs & Stratton Service Centers. It contains specifications and detailed instructions on how to repair and adjust these types of engines.

For other OHV Single Cylinder Engines use Repair Manual 276781.

## 276781 Single Cylinder OHV Repair Manual



For most single cylinder OHV engines built after 1981. This manual is used by Authorized Briggs & Stratton Service Centers. It contains specifications and detailed instructions on how to repair and adjust this type of engine.

Used in Training Kits: CE9001A, CE9028, CE9040

For Vanguard™ Single Cylinder Engines use Repair Manual 272147

## 279000 Single Cylinder OHV Professional Series™ Repair Manual



For single cylinder vertical crankshaft Professional Series™ OHV engines built after 1981. This manual is used by Authorized Briggs & Stratton Service Centers. It contains specifications and detailed instructions on how to repair and adjust this type of engine.

For prices and ordering, see the inside front cover for your regional source of supply contact.

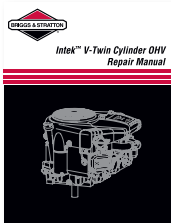
## 277527 700/750 Series™ DOV® Repair Manual

Repair manual for Direct Overhead Valve (DOV®) Air-Cooled Engines.



## 273521 Intek™ V-Twin Cylinder OHV Repair Manual

Repair manual for Intek™ V-Twin overhead valve (OHV) engines. Model series 405700, 406700, 40F700, 40G700, 40H700, 445700 and 446700.



## 276535 2-Cycle Snow Engine Repair Manual

Repair manual for 2-cycle R-Tek snow engines.





# DVDs

## THEORY PROGRAMS

Video programs are available at a nominal charge. While most of these video programs have been developed for service dealer schools, these programs can also serve the needs of vo-ed students. All video programs are recorded on DVD.

### CE3070 4-Cycle Theory DVD

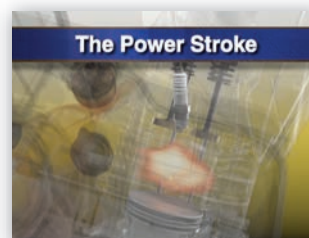
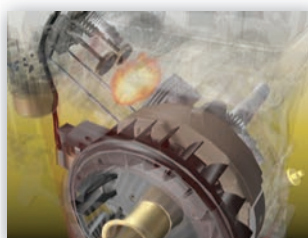
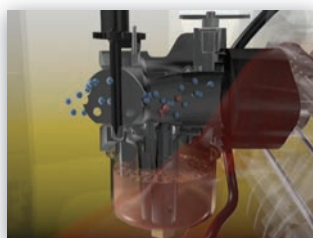
This video (6 minutes) is the foundation for understanding how an engine operates and is the cornerstone of a small engine class. Basic 4-cycle theory is described through the use of high-end computer generated graphics.

Used in Training Kits:

CE9001A

CE9039

CE9040



### CE3013 Theories of Operation – Volume 1 DVD

This is a series of four distinct programs (64 minutes total) on a single DVD. These selections cover four basic topics which are vital to understanding the operation of a 4-cycle engine.

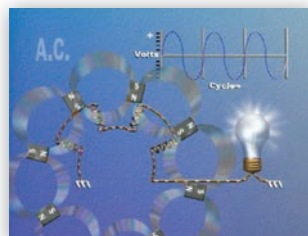
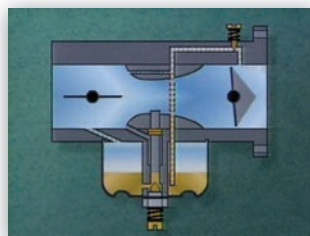
Used in Training Kits:

CE9001A

CE9039

CE9040

1. Carburetor Theory
2. Valve Theory and Repair Procedures
3. Governor Theory and Troubleshooting
4. Electrical System (Alternator Theory)



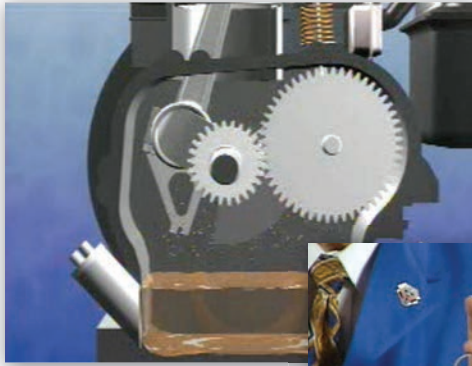
### CE3101 Electrical Testing - Voltage Drops Getting to More Bill Paying Money



Learn how to pinpoint a problem in an electrical circuit by using voltage drop testing. Quickly show where a circuit has resistance (defective components, corrosion, etc.) not allowing it to perform properly.

The goal of any servicing dealer is to make a profit by taking care of customers. This video looks at measuring several key variables such as selling, shop time, technician output and margin targets.

## CE3029 Theories of Operation – Volume 2 DVD

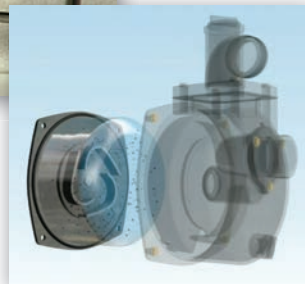


This serves as a companion video (72 minutes) to Theories of Operation - Volume 1. It contains four advanced topics on a single DVD.

1. Horsepower and Torque: explains torque as a rotational force and horsepower as a calculation of work performed.
2. Advanced Carburetion Theory: a brief review of theory and basic carburetor physics followed by state-of-the-art computer animated graphics.
3. Troubleshooting Carburetor Systems: carburetor problems are divided into three main categories; starting problems, performance problems and leakage. Examples, tests and repairs are presented as well as "Tricks-of-the-Trade."
4. Dynamics of Engine Failure, (see CE3113 pg. 24)

Used in Training Kit: CE9001A

## CE3097 Water Pump & Pressure Washer Theory & Troubleshooting DVD



This DVD (42 minutes) is an excellent presentation on the operational theory of water pumps and pressure washers. Various principles of physics, liquids, and creating pressure differentials are explained in making this equipment work. 3-D and animation graphics clearly document the coordination of all the operating systems. The principles of operation and basic equipment troubleshooting is covered in this DVD. Maintenance and parts nomenclature are also included.

## CE3109 Generator Theory Reminder DVD



Electrical energy can be produced from a variety of means. This DVD explains how a portable generator produces power using a brushed (15 minutes) and a brushless (12 minutes) system. Using high-end 3-D graphics, students will learn the induction method of producing power.

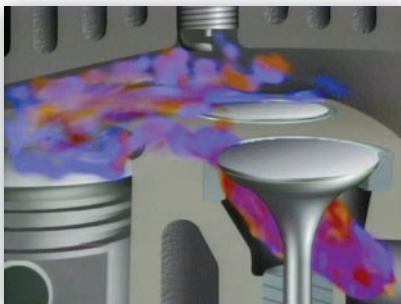
In addition, there is also a presentation on the generator market and maintenance (8 minutes). (Use this to educate students on the profit-making opportunities of working on portable generators.)

## DVDs

### MAINTENANCE & TROUBLESHOOTING PROGRAMS

#### CE3001 Maximizing Engine Life

##### Through Preventive Maintenance DVD



The importance of establishing a preventive maintenance system is the primary message of this DVD (35 minutes). Included are explanations of the basic engine maintenance requirements. Implementing a preventive maintenance system assures top power delivery and keeps the equipment more productive over a longer period of time. While the message is geared for equipment operators and owners, anyone learning about small engines can benefit from this important information.

#### CE3113 Dynamics of Engine Failure DVD



This video (55 minutes) sets the scene with various scenarios of different engine failures. The failures covered are abrasive ingestion, insufficient lubrication, over heating and breakage. The video can be used as a stand-alone presentation on engine failures.

This DVD has an additional PowerPoint presentation on the five common causes of engine failures, all supported by embedded video segments. The failures include abrasive ingestion, insufficient lubrication, over heating, over speeding and breakage. You will be able to show the evidence of the failure and explain how and why it happened.

Also enclosed is a PDF version of our Major Engine Failure Analysis book (CE8034). This book serves as a printed resource for the students to follow using the above presentations.

#### CE3114 Diagnostics - Volume I DVD



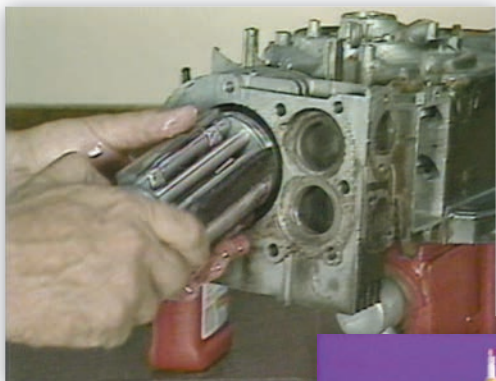
This DVD is a series of videos explaining different diagnostic approaches.

- Quick Check Diagnostics, (10 minutes) - A troubleshooting video using a procedure based upon an interview process with a customer. This procedure enables a technician to quickly look at a piece of equipment to help determine what is wrong.
- Compression Diagnostics, (38 minutes) - This video enables the student to truly understand 4-cycle theory and the components behind it. Time will also be devoted to performing a 3-angle valve job which enhances engine performance.
- Quick Flow Diagnostics, (15 minutes) - After initially troubleshooting a piece of equipment when it comes in, which technician should work on it? This video helps to develop a process on how to quickly and effectively get the piece of equipment through the shop.
- Carburetion Diagnostics, (18 minutes) - Why doesn't the engine start? Or, why does the engine run poorly? This video looks at all of the functions of the carburetor and gives the student a clear understanding of symptoms and what causes them.

All of the above videos are supported with a PDF booklet included on the disk.



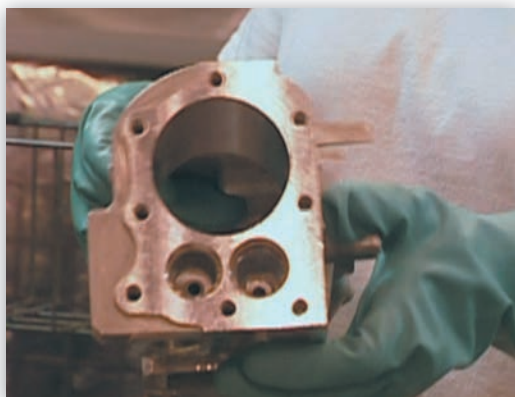
## CE3091 Archived Service Information DVD



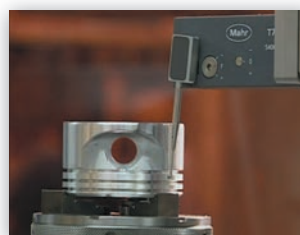
This video (56 minutes) is a collection of four important service procedures, all on a single DVD.

1. Cylinder Resizing (12 minutes) - In addition to the actual resizing procedure, importance is given to describing the relationship between the cylinder bore and piston rings as well as a discussion on cylinder bore wear.
2. Repairing Rewind Starters (16 minutes) - The classic "3 minute rewind starter repair" is demonstrated in step-by-step detail.
3. 4 HP 2-Cycle Theory of Operation (13 minutes) - The third port loop scavenge design is explored.
4. Electrical Systems: Ignition, Charging & Starting (15 minutes) - Covers basic theory with simple troubleshooting as it relates to Briggs & Stratton electrical systems.

## CE3069 Briggs & Stratton Story DVD



This video (50 minutes) covers the Briggs & Stratton story, history, products and commitment to supporting customers worldwide. Includes two engine plant tours (small and large engines). Show your students how an engine is built!





# POWERPOINT TRAINING CDs

## CE3137 OHV 950 Series™ Engine Instructor's Reference



Contains Daily  
Lesson Plans and Lab  
Procedures

The information on this CD will provide instructors with basic techniques needed to teach small engine technology. There are two methods enclosed for teaching the course curriculum. The first method, developed by a high school teacher with over 30 years of experience, utilizes a complete lesson plan for an 8-9 week class taught at the appropriate level.

The second method can utilize the additional information on this DVD. These materials will be helpful for a class that is giving an overview of small engines, versus a full semester class.

Includes detailed step-by-step teardown script for the new Model 130G00 OHV 950 Series™ horizontal shaft engine featured in the CE9001A OHV Training Kit.

Used in Training Kits: CE9001A, CE9041

## CE3094 "Overhead Valve" (OHV) Engine Instructor's Reference

### Loosen Rocker Arm and Jam Screw

- Use 5/8" wrench and 1/8" Allen wrench
- Only need to loosen both pieces about 1/4 turn
- Turn both arms to the side and remove push rods



Includes a detailed step-by-step teardown script for the Model 12 OHV 900 Series™ horizontal crankshaft engine, PowerPoint slides, course outline and photo library to create customized slides.

Used in Training Kits: CE9028, CE9040

Contains Daily  
Lesson Plans and Lab  
Procedures

## CE3093 L-Head Engine Instructor's Reference

### Remove Carburetor and O-Ring

- Release governor spring from control bracket
- Use 3/8" Socket
- May need to twist carburetor so linkage and spring are removable
- Inspect O-Ring for cracks or tears



Includes detailed step-by-step teardown script for the popular Briggs & Stratton 625-725 Series™ vertical crankshaft engine, PowerPoint slides, course outline and photo library to create customized slides.

Used in Training Kits: CE9039, CE9047

Contains Daily  
Lesson Plans and Lab  
Procedures

## CE3125 V-Twin Engine Instructor's Reference

### Remove Exhaust Manifold

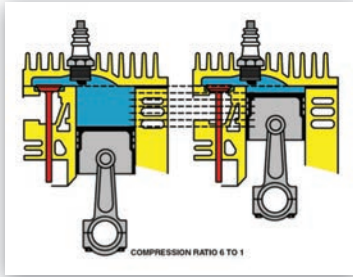
- Use 12 mm socket 4 screws or T-40 Torx to remove exhaust manifold
- Use 13 mm socket to loosen muffler connection



Includes detailed step-by-step teardown script for the popular Briggs & Stratton Vanguard™ V-Twin OHV engine, PowerPoint slides, course outline and photo library to create customized slides.

Used in Training Kit: CE9056

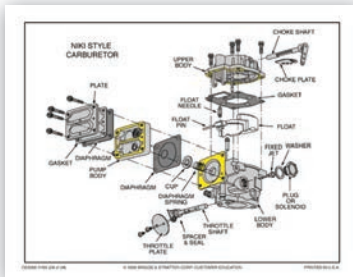
## CE3017 Basic Engine Systems



Contains 86 slides of 4-Cycle and 2-Cycle theory – L-Head, Overhead Valve (OHV), Direct Overhead Valve (DOV®) engine designs, governors, compression ratio, compression release systems, rings, cubic inch displacement, lubrication systems and counter balancing systems. Highly recommended for the beginner...it's the cornerstone of a small engine program.

Used in Training Kits: CE9001A, CE9028

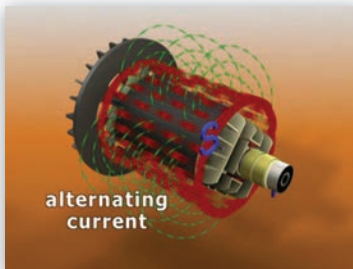
## CE3056 Fuel Delivery Systems



Contains 107 slides of basic carburetion systems diagramming common and Briggs & Stratton carburetors and fuel pump circuits.

Used in Training Kits: CE9001A, CE9028

## CE3095 Portable Generator Instructor's Reference



Includes electrical theory, detailed step-by-step teardown scripts for Briggs & Stratton 3500 watt and 4000 watt generators, generator and engine PowerPoint slides, test equipment usage, course outline and photo library to create customized slides.

# VO-ED INSTRUCTORS FACTORY SERVICE TRAINING

Briggs & Stratton conducts Factory Service Training for Vo-Ed Instructors. These schools not only cover the operation and theory behind Briggs & Stratton air-cooled engines, but also offer specific insights in developing teaching aids such as carburetor cut-a-ways, and other ideas. There are a number of additional educational opportunities available to instructors of air-cooled gasoline engine courses. These schools are conducted at different times during the year. See [ThePowerPortal.com](http://ThePowerPortal.com) for more information.

## Beginner Vo-Ed Instructors' School

**SCHEDULED DATES: June 8-11, 2015; June 15-18, 2015**

### WHAT IS IT?

If you are an instructor who is relatively new teaching small engine technology, then this is where you will want to start.

By attending this course you will have received enough knowledge and confidence to be able to conduct your own basic small engine class. This program will follow lesson plans designed for high schools that can be found on our Overhead Valve (OHV) Engine Instructor's Reference CD. It is intended to walk you through each of the same steps you would use in your classroom and lab. You will perform complete teardowns on a horizontal shaft OHV and a vertical shaft L-Head engine. In addition, you will receive an assortment of training materials from CDs that contain lesson plans, PowerPoint presentations, teardown scripts and more, so that you will be able to teach the same concepts and procedures in your own classroom.

### COVERED TOPICS:

- The use of learning materials to deliver a full small engine course
- How to properly identify a Briggs & Stratton engine along with how to obtain support information
- How to access useful information via Briggs & Stratton's web sites (If you have a laptop computer with wireless Internet capabilities, be sure to bring it with you!)
- Four-cycle theory will be explored thoroughly through the use of multimedia
- Hands-on tear down of L-Head and OHV engines
- Explanations of engine systems from A to Z, including:
  - Carburetors
  - Fuels & Oils
  - Ignitions
  - Governors
  - Compression

### WHO SHOULD ATTEND?

- Training professionals that are in need of a thorough refresher or have little knowledge of basic small engines and 4-cycle theory
- Instructors who have never taught an engines course before
- Teachers who are looking for pre-existing curriculum and instructions on how to best apply it in class

**PREREQUISITE:** None



# Experienced Vo-Ed Instructors' School

**SCHEDULED DATES: July 13-16, 2015**

## WHAT IS IT?

The focus of this school is to concentrate on more complex concepts. Topics pick up from where the beginner course ended and includes more hands-on activities.

This school will also focus on making training props for your classroom that make difficult subjects easier to understand.

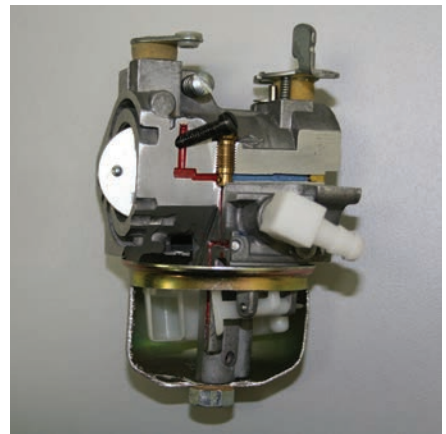
## COVERED TOPICS:

- Compression systems, including performing a 3-angle valve job
- Different types of carburetors along with a hands-on troubleshooting activity
- Significant time will be devoted to making cut-a-ways of carburetors and other engine related components
- We will also make a simple device to show the Venturi effect within carburetors
- Alternator systems will be covered in-depth with an activity to measure alternator electrical output

## WHO SHOULD ATTEND?

- Vocational educators that want or need to expand their knowledge to be able to take their classroom to the next level
- Instructors looking for a better way to deliver engine concepts through the use of engine and engine component cut-a-ways made by the instructors themselves

**PREREQUISITE:** Vo-Ed Instructors - Briggs & Stratton Beginner Course or 2+ years of teaching small engines





## Course Package Amenities

- Lodging (individual room)
- Breakfast & Lunch on Day(s) of Class
- 1 Dinner Banquet
- All Course Materials
- Transportation Between the Training Facility and Place of Lodging
- Framed Certificate to Qualifying Graduates
- Network with Fellow Technicians or Instructors
- Personal Attention (Typical Class Size is 10 - 20 Students)
- Please make travel arrangements to arrive the day before class starts and to depart after class ends.

## Course Fees

Course Title	Course Fee (Includes Lodging)	Course Fee (No Lodging)	MST Fee (Lodging Fee Only)	Diamond Dealer® (Lodging Fee Only)	VO-ED with CE9001A Kit Purchase
Beginner Vo-Ed Training	\$900.00	\$400.00	\$500.00	\$500.00	FREE
Experienced Vo-Ed Training	\$1,000.00	\$500.00	\$500.00	\$500.00	FREE

**For application form and more information, go to [ThePowerPortal.com](http://ThePowerPortal.com) —  
Educational Resources > Vocational Instructor Continuing Education**

**Master Service Technicians (MSTs), Diamond Dealers™ and Educational Facilities that have purchased the CE9001A OHV 950 Series™ Engine Training Program Kit are eligible for reduced factory school fees.**

- Active MSTs receive free admission at each training course (excludes lodging or transportation to/from Milwaukee)
- Diamond Dealers™ receive one free factory school every season (excludes lodging or transportation to/from Milwaukee).
- Purchasers of CE9001A Training Kit receive one FREE course (includes lodging, excludes transportation to/from Milwaukee).
  - *FREE course offer is valid for up to 2 years from date of purchase of CE9001A Training Kit.*
  - *Include copy of invoice for CE9001A Training Kit with application.*
- We're so confident you'll be pleased with your experience that we offer a money-back guarantee if you are not satisfied with your training.

**NOTE:** All classes are held at the Briggs & Stratton Training Center – Menomonee Falls, WI. Briggs & Stratton reserves the right to cancel a scheduled course up to 10 days prior to the start date. If a cancellation does occur, Briggs & Stratton will promptly notify you of alternate dates available, but will not accept liability for non-refundable travel tickets.

# 2015 FACTORY SERVICE TRAINING COURSES APPLICATION

Date of Application \_\_\_\_\_

School Name \_\_\_\_\_

School Address \_\_\_\_\_

School Telephone Number \_\_\_\_\_

City \_\_\_\_\_

School Fax Number \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

E-Mail \_\_\_\_\_

Yrs of Industry/Teaching Experience \_\_\_\_\_

Applicant Name \_\_\_\_\_

Male/Female \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Cell or Home Number \_\_\_\_\_

Course:

First Choice Date \_\_\_\_\_

Second Choice Date \_\_\_\_\_

## Customer Education & the EETC



Briggs & Stratton is a strong supporter of the Equipment and Engine Training Council (EETC). The EETC is deeply involved in two distinct areas, technician

certification and school accreditation. Attending a Briggs & Stratton course will help the technicians with fundamental knowledge that can be applied to EETC certification tests. Additional information can also be supplied to Vo-Ed Instructors for developing an accredited EETC educational facility. For additional EETC information, visit [www.eetc.org](http://www.eetc.org).

☐ VO-ED Instructors please attach a copy of the invoice for the CE9001A Training Kit if you purchased one within the last 2 years to receive free course.

☐ NO LODGING REQUIRED

**PLEASE MAKE TRAVEL ARRANGEMENTS TO ARRIVE ON SUNDAY AND TO DEPART ON FRIDAY**

Payment can be made by credit card, purchase order or check, payable to Briggs & Stratton Corporation.

Submit application/payment via e-mail at [cust.ed@basco.com](mailto:cust.ed@basco.com), fax to 414-259-5214 or mail to: Briggs & Stratton Corporation, Attn: Customer Education, P.O. Box 702, Milwaukee, WI 53201-0702.

(Check one) ☐ Visa ☐ MasterCard ☐ American Express ☐ Discover

Print name (as it appears on card):

Account Number:

Signature:

Exp. Date:

**NOTE: PLEASE USE (1) APPLICATION FORM PER PERSON ATTENDING • CANADA ONLY:** Please make school fee payable in U.S. funds. CANCELLATION MUST BE RECEIVED IN WRITING AT BRIGGS & STRATTON 10 DAYS PRIOR TO THE WEEK SCHEDULED TO OBTAIN A REFUND.

I understand that Briggs & Stratton may take photographs and/or video of event participants and activities. I agree that Briggs & Stratton Corporation shall be the owner of and may use such photographs and/or videos relating to the promotion of future events. I relinquish all right that I may claim in relation to use of said photographs and/or videos.

Signature of Participant \_\_\_\_\_

Date \_\_\_\_\_

# SPECIALTY TOOLS

## 19300 Basic Tool Kit



### KIT INCLUDES:

19061	Carburetor Jet Screwdriver, Small Jets
19062	Carburetor Jet Screwdriver, Large Jets
19063	Valve Spring Compressor
19069	Flywheel Puller - small, hole distance 1-5/8"
19070	Piston Ring Compressor (5 HP <sup>†</sup> & below)
19165	Flywheel Puller - medium, hole distance 2"
19200	Tachometer (Treysit Sirometer)
19203	Flywheel Puller - large, hole distance 2-13/16"
19340	Piston Ring Expander

19368	Tester - Ignition
19393	Torque Wrench
19433	Flywheel Holder <sup>1</sup>
19442	Torquex Star Bits <sup>2</sup> in handy pouch
19480	Tang Bender
19620	Fuel Line Removal Tool
795161	Alcohol Fuel Tester
CE5121	Air Gap Gauge .010" (.254 mm)
MS-4185	Master Parts Catalog

**Note:** Each tool part number can also be ordered separately.

<sup>1</sup>For replacement strap, order 19489

<sup>2</sup>To order replacement bits, specify: 19510 (T-10) - 19511 (T-15) - 19512 (T-20) - 19482 (T25) - 19513 (T-27) - 19514 (T-30) - 19515 (T-40) - 19516 (T-45)

<sup>†</sup>All power levels are stated gross HP per SAE J1940 as rated by Briggs & Stratton.



#### **19545 Leakdown Tester**

Used to test the sealing capabilities of the compression components of all engines. Comes with crankshaft clamp.



#### **795161 Alcohol Tester**

Marked with alcohol content lines at 10%, 20%, 70% and 85%. This provides the technician with visual cues as to the alcohol content.



#### **19602 Digital Meter**

Meter features the ability to test for AC or DC voltage, resistance (Ohm's), capacitance, diode function, temperature. Incorporates clamp for easy measurement of amperage (AC or DC).



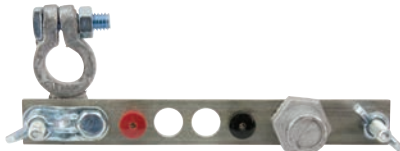
#### **19368 Ignition Tester**

Designed to simulate true engine ignition resistance and system capabilities under safe test conditions.



#### **19598 Digital Tach & Hourmeter**

Meter displays RPM while engine is running. When engine is stopped, meter displays elapsed time.



#### **19468 DC Amp Shunt**

Used to measure amperage in a 12 volt system. Color-coded receptacles hold digital multimeter leads securely while testing. This tool works with any digital multimeter with a millivolt scale. Eliminates blowing the fuse in multimeters, due to high current loads such as charging and starting.



#### **19608 T40 Plus Torx® Bit**

This Plus Torx® bit design is to be used for the Model 31 & 33 rod bolts. If the technician tries using a standard T40 Torx bit on these rod bolts, they will have a real potential of stripping the head of the bolt.





#### 19461 Primer Bulb Removal Tool

For quick and easy removal of primer bulb and retainer on engines equipped with primer bulb system.



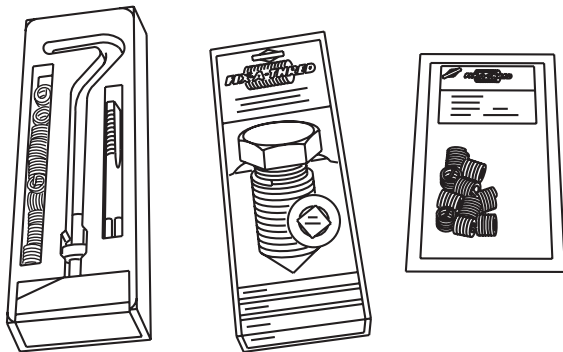
#### 19462 Primer Bulb Installation Tool

Installs new primer bulb and retainer in a "snap."



#### 19620 Fuel Line Removal Tool

This tool is essentially a pry bar for removing fuel line from barbed fittings. The bar is carefully formed, machined, hardened and plated to ensure a long life. To use, remove fuel line clamps. Push fork at end of tool behind the end of the fuel line. Carefully leverage the tool against some existing engine component as a fulcrum and pry fuel line from fitting. Use caution to prevent damage to linkage or fuel system controls. Inspect all removed fuel lines for damage or hardening and replace as necessary.



#### Fix-A-Thread Kits

For repairing damaged and stripped threads.

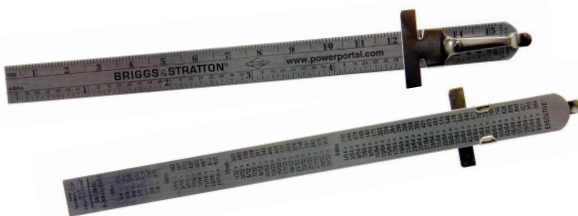
100024 - Master Thread Repair Kit includes:

- 100007 Thread Repair Kit 10-32
- 100008 Thread Repair Kit 1/4-20
- 100009 Thread Repair Kit 5/16-18
- 100010 Thread Repair Kit M5x.8
- 100011 Thread Repair Kit M6x1
- 100012 Thread Repair Kit M8x1.25
- 100013 Thread Repair Kit 14 mm Spark Plug



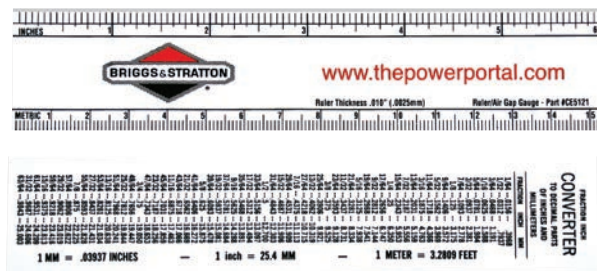
#### 19607 Otoscope

The use of the otoscope offers the technician the ability to see into small passages and jetting of carburetors. The otoscope offers 2X minimum magnification and a push button switch to activate the bulb to ensure that the technician will not forget to turn off the light causing the battery to be drained.



#### CE5005 SAE & Metric Equivalence Stainless Steel Scale (10 per bag)

This tool is almost a requirement for the shirt pocket of any technician. Made of flexible stainless steel, this SAE & Metric Equivalence scale is equipped with a T-square/pocket clip that functions as a depth gauge. One side of the scale is metric and displays millimeters. The other side is graduated in inches and displays 64ths. The reverse side features a handy decimal equivalent chart.



## CE5121 Air Gap Gauge

Disguised as a flexible SAE & Metric polymer ruler, this tool's hidden purpose is a reusable, armature air gap gauge. To use, back the armature out to its widest clearance and snug it down. Line the flywheel magnet up with the armature, insert the gauge between the two and loosen the armature screws. The magnet will pull the armature down to the gauge. Tighten and torque the screws and remove the gauge. Sized at .010 to .012 inch, this setting can be used for all Briggs & Stratton® engines.



## MS4185 Master Parts Catalog

**Includes tool section.** See [ThePowerPortal.com](http://ThePowerPortal.com) for information on all Briggs & Stratton Parts and Tools!



## AM3006A The Power Within™ Banner

Size 48" x 28"

## Notes:

# ThePowerPortal.com

Your "One Stop" Information Source



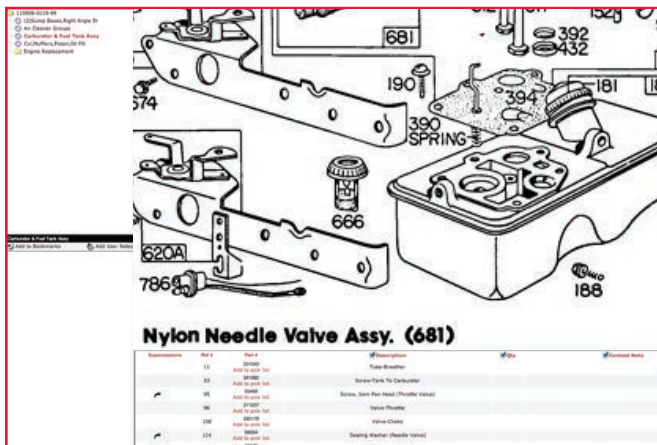
Briggs & Stratton has developed a powerful and flexible private web-based portal for its family of products, ThePowerPortal.com.

## FEATURES

- Secure, on-demand, 24x7 access to meaningful information and functions for all of our products.
- Complete training resource offerings
- Engine donation program
- Classroom support materials/demos
- eParts - service parts and/or whole goods look-up
- Technical publications search - 1,000s of technical and service documents
- Continuing education for instructors
- Power Channel - video training and testing for students



## E-PARTS LOOK-UP



## THEPOWERPORTAL.COM

If you have not already registered for an individual log-in ID, go to [www.thepowerportal.com/register.htm](http://www.thepowerportal.com/register.htm) or scan the 2D code with your smartphone.





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