

ARIZONA FLYWHEELERS  
P.O. BOX 2012  
COTTONWOOD, AZ 86326



March Edition  
2020

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COTTONWOOD, AZ 86326

President Gary Covert  
928 301 0649

Vice President Jim  
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928 282 7549

Secretary Barry Adico  
928 634 4490

## ARIZONA FLYWHEELERS

MARCH, 2020 NEWSLETTER

### PRESIDENT'S LETTER

After consulting with several members and the Verde Valley Fairgrounds, we will go together with the fairgrounds, and expand their Fall Festival to a two day event; Fri., Oct. 30th and Sat., Oct 31st. We will have the engine raffle at that time, so if you have bought tickets we will hold them until Oct. and have the drawing then. Of course in the meantime you can purchase more or if you haven't purchased any yet it is not too late. We will have the room for our usual engine display, tractor pulling, and silent auction. For members who usually pay their dues at our show, you can mail your dues to us, a form is attached. I have been told our show is the longest continuous running show in AZ. By having something in the fall, this will keep our record intact. As of now the Pine show is still on, but that may change as the time grows nearer. Cancelling our show was a hard decision to make but many members supported the move and as it turned out it would have been cancelled anyway. I'm sure we will work our way out of this situation the virus has caused, and hopefully in the near future we can get our lives back to normal.

Gary Covert

### April Meeting—Cancelled.

#### Meeting Schedule

**April 1, 2020 —  
— CANCELLED**

May 6, 2020

June 3, 2020

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#### UPCOMING EVENTS:

- Look for updates—cancellations may occur.
- May 16—Pine Show
- Flagstaff—Beat the Heat Event, July 25—26
- **Cancelled - Tulare Calif Show for April 17 - 19**

Membership dues are payable by January 1st

# Sheppard Diesel Tractors



Photo: RH Sheppard Company Tractor

## Recently Departed Members

**Jean O'Loughlin**, aged 90, passed peacefully in her sleep on March 7, 2020.

Jean and Tom moved to Cottonwood from Southern California in 1995, where they became members in the Arizona Flywheelers,

A Remembrance of Jean will be held later this year. No services will be held in April



**Max Betenbender**, 73, of Coggon, Iowa, passed away peacefully in his sleep on Friday, Sept. 20, 2019, Max was the president of Betenbender Manufacturing. He was a member of the Arizona Flywheelers for many years. He was remembered for operating a small hay bailer at our show.



A little know business called The RH Sheppard Company was a prominent manufacturer of diesel engines in the 1930s and 1940s. During World War II, they produced small, diesel engines for use on U.S. Navy lifeboats.

After World War II , they produced several tractors; from a two cylinder, a three cylinder and a four cylinder. Tractor production began in 1949.

The SD-2 was a 2-cylinder tractor with sheet metal similar to other tractors of its time, but higher priced than the competition. the SD-3 (3 cylinders), a 32hp tractor sold for \$2,995.

The 4-cylinder model (SD-4) and a Kit to convert a Farmall gas tractor to a diesel engine tractor were also available. Sheppard stopped manufacturing tractors in 1956.

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## Car to Tractor Kits

Several old magazines have ads illustrating Model T Fords with conversion kits to make them into tractors. Companies such as Staude Mak-a-Tractor \$195. or the Smith Form-a-Tractor \$ 255. companies were examples illustrated. The frame attachment would extend the full length of the Ford and attach to the front axle. The tractor wheels would replace the standard Ford wheels for traction in the fields. Source: Old Time Agriculture Ads by R. F. Karolevitz.

## Club Donation to Students

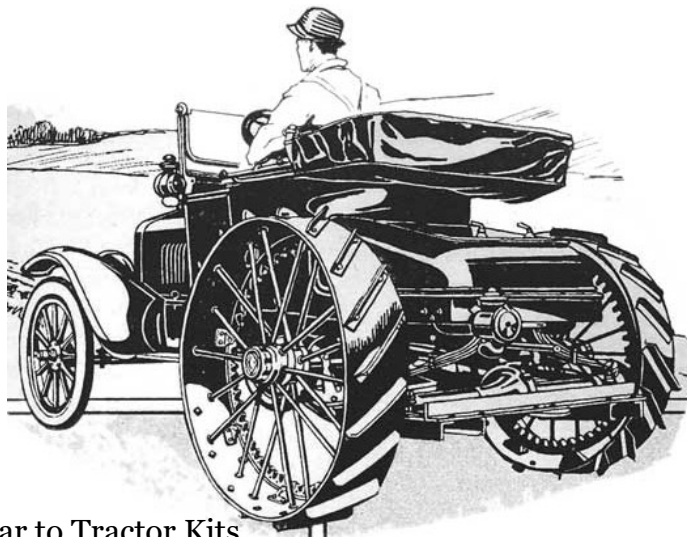
The Arizona Flywheelers Club were generous to Mingus High Students.

Recently 7 members of the Arizona Flywheelers Club visited Mingus Union



High School and were impressed by the Career and Technical Programs, (CTE) including trade and industrial education, such as automotive, agriculture, welding, CAD design, sports medicine, computer application software, and more. Many of the school's instructors have master's degrees in their technical fields and teach at the local college which enables the students to receive dual credit for their work at the CTE program at Mingus High School, and Yavapai College.

However, it is unfortunate that some students lack the \$80 tuition for the college credits in order to complete the certification process. The Az Flywheelers made a \$1000 donation to the CTE program to assist 25 students with tuition, and club President, Gary Covert, presented the check this past month with several members attending. Recognition of the club was in the local newspaper.



Car to Tractor Kits

*WELCOME NEW*

*MEMBERS*

Ted Earl, Prescott, AZ

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## Meeting Minutes

**March 4, 2020**

Meeting called to order by President Covert at 7AM. Minutes were read and approved. The finance report was given, we have \$7966.77 as our working balance plus \$2928 for Reserve fund for making donations. We received a thank you from Robert Peacock's family for the flowers at his funeral. Jack Castimore made some announcements: Jean O Loughlin is in assisted living, Joe Nightingale is moving to Alaska for health reasons, members appearing on television concerning the club event, hat delivery this coming week, Bill Cowan will do the BBQ for the upcoming show. President Covert gave an update concerning member functions at the show. Meeting was adjourned at 7:13 AM.

Barry Adico, Secretary.



# How does it work!

Before we start: you will need to FORGET everything you know about steam or gas and diesel internal combustion engines...the HOT AIR engine is as different from them as a gas turbine or a pulse jet engine!

## Ryder-Ericsson Hot Air Engine Cycle

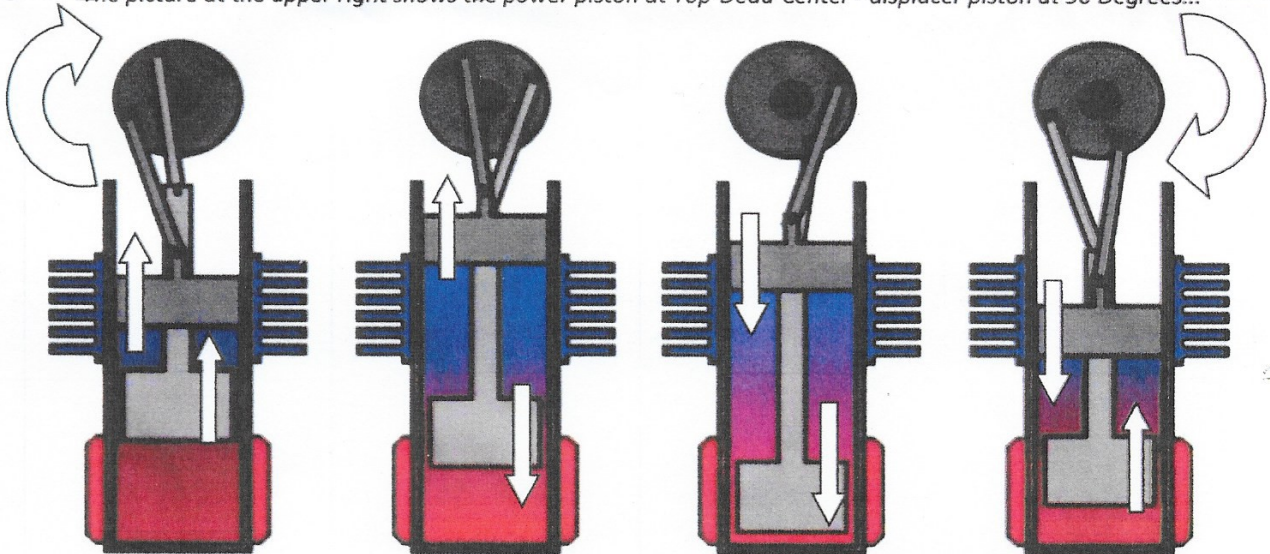
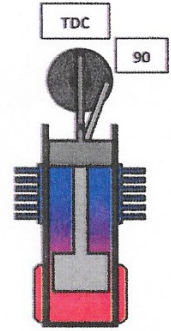
A BETA-TYPE STIRLING (single cylinder) external combustion "closed cycle" engine!

There is only one cylinder, hot at one end and cold at the other.

The sealed power (COLD) piston at the open end (top) of the cylinder drives the flywheel.

Leading the power piston by 90 degrees on the flywheel, the unsealed and semi-loose-fitting lower displacer (HOT) piston "shunts" the air between the hot and cold ends of the cylinder...in a CLOSED AIR SYSTEM.

The picture at the upper right shows the power piston at Top-Dead-Center - displacer piston at 90 Degrees...



Heat Stroke	Power Stroke	Cooling stroke	Pre-heat, Compression Stroke
<p>Rotation of the flywheel is clockwise... the lower displacer piston has risen to a few degrees before TDC, the top power piston is rising from its compression stroke, and the majority of the condensed cool air is in the lower HOT chamber adjacent to the heat exchanger (fire)... the air in the lower chamber is heated and "expands" and the pressure rises...</p>	<p>Rotation of the flywheel is clockwise...the displacer piston has passed TDC and is moving downward, forcing the "expanded" hot air below it to move between itself and the cylinder wall and into the chamber between itself and the power piston..<u>driving the power piston upward and rotating the flywheel...</u></p>	<p>Rotation of the flywheel is clockwise...the displacer piston continues to move to the bottom of its stroke forcing most of the air into the chamber between itself and the now downward moving power piston...the majority of the air is now in the large chamber between the pistons being "cooled" by the pumping water...</p>	<p>Rotation of the flywheel is clockwise... the displacer piston is now rising and the power piston continues descending, compressing the "cooled condensed" air between them and begins forcing the air down past the displacer into the hot lower chamber...</p>

March 2020 INSERT

**CLASSIFIED ADVERTISING**

**For Sale**

**1943 International LB 3-5 HP engine** mounted on a garden tractor frame. Cart has a can crusher, drill press, and a burr mill all driven by one belt from engine. \$700 Gary Covert 928-301-0649



**For Sale:** Don Meakin has for sale two pages of engines, etc. as he is selling out. Sparta 2 hp on trucks \$ 700., also, Olds 4 hp; Economy: Water Lou Boy and many others. His contact information is 602-882-3968 or email: donmeakin

**ENGINES:** Bob Peacocks Estate: Items For Sale: 20 plus engines several Maytags. 3 Utilimotors and several Briggs and Stratton kick start engines. Several rope start engines. Also a wide variety of other old parts and accessories, plus tools. Estate sale for members on Fri., April 10 & Sat., April 11 from 9am to 3pm.

**FOR SALE:** Hit & Miss Engines, books, lathe, milling machine, metal band saw, and more. Nightingale, Joel or Laura @phone: 928-649-9463 or email: [lhenkelm@hotmail.com](mailto:lhenkelm@hotmail.com)

**NOTE:** More photo's of for sale items on the club website.

**WANTED:**

• Wanted - PLACE YOUR AD HERE

**PARTS / Misc.**

List your parts or miscellaneous here.



*Gary C. engine above.*

*B. Peacock engines Below*



One of the Nightingale engines shown below.



**Announcements. Tentative:**

**Combined— Fall Festival with our Annual Engine & Tractor Show. October 30—31, 2020 at the Verde Valley Fairground, Cottonwood**

**Our Website is:**

**<https://www.arizonaflywheelers.com/>**

Business Advertisements can appear in this newsletter.

Contact: jack Castimore at [jcastimore@hotmail.com](mailto:jcastimore@hotmail.com)

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Secretary Barry Adico 928  
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**Pine will be having their show  
on May 16th, 2020**

**EDGETA Branch 121 - Flagstaff,  
AZ, "Beat the Heat", July 25,  
26, 2020**

ARIZONA FLYWHEELERS

## **Membership dues are payable by January 1st**

Membership dues are payable by January 1st

Dues are 15.00 dollars per year. Badges are \$10.00 or \$12.00 each, Hats are \$10.00 and Tee shirts are \$ 8.00. Polo shirts are \$20.,& \$22 for 2xl. Order from Arizona Flywheelers, P.O.Box 2012 Cottonwood, AZ 86326. Make checks payable to Arizona Flywheelers. Thank you

Please visit our website - [www.arizonaflywheelers.com](http://www.arizonaflywheelers.com)



## Dues

January will be the beginning of a new year for the Arizona Flywheelers and it will be time to pay your annual dues.

The dues amount will be \$15. per year. A dues form is included in the newsletter.

Please email me with any due's questions. My email address is [joanandherb@aol.com](mailto:joanandherb@aol.com) or call me at (928) 282-7549

Joan Miller  
Treasurer for the Arizona Flywheelers  
P. O. Box 2012  
Cottonwood, AZ 86326

**Name**

\_\_\_\_\_

Spouse

\_\_\_\_\_

**Address**

\_\_\_\_\_

**City** \_\_\_\_\_

**Zip** \_\_\_\_\_

Telephone # (\_\_\_\_\_) \_\_\_\_\_ Cell phone # (\_\_\_\_\_) \_\_\_\_\_

**E-mail address** \_\_\_\_\_

( ) New Member ( ) Renewal ( ) Address Change ( ) Name Change ( ) Already a member

DUES: \$15.00 FAMILY AMOUNT PAID: \_\_\_\_\_

BADGES: \$10.00 EACH (CLIP OR PIN) AMOUNT PAID: \_\_\_\_\_

\$12.50 EACH (MAGNET) AMOUNT PAID: \_\_\_\_\_

TOTAL PAID: \_\_\_\_\_

Name on Badge: \_\_\_\_\_

Annual CLUB dues are **\$15 per year**

Dues are renewable on January 1st of each year.

Please make checks payable to **Arizona Flywheelers** and mail to:

**Arizona Flywheelers, P. O. Box 2012, Cottonwood, AZ 86326**

# Nightingale engines and tools for sale

Contact Laura or Joel at 928-649-9463





**Peacock Estate Open to Members on  
Fri., April 10 & Sat., April 11 from 9am to 3pm.**

***More info. will be emailed as a reminder for the event.***

