AN INTERNATIONALLY PATENTED CLIMATE CHANGE SOLUTION IS BEING IGNORED AND/OR REJECTED

YOUR VOICE IS REQUIRED

PREPARED BY ANALYSTS OF PNEUMATIC SYSTEMS LIMITED (*APS*).

APS HAS DEVELOPED CONSERVATION LOGIC SINCE 1976 RESULTING IN A THREE-PERSON CREW MITIGATING MORE THAN 60,000 PERSON-YEARS OF GHG EMISSIONS AND HAS RECEIVED INTERNATIONAL CLIMATE CHANGE REDUCTION PATENTS **OUR RESEARCH IS BEING IGNORED**

THE VOICE OF YOUTH IS REQUIRED FOR REAL ACTION !!



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CONTACT: Dave Strain (President)

PREFACE

Climate change is a major psychological burden on the youth, as per the linked survey reported by the BBC.

LINK: <u>https://www.bbc.com/news/world-58549373</u>

THERE IS A PATENTED PRACTICAL SOLUTION

REASONS TO TAKE POSITIVE ACTION TO REDUCE THE USE OF FOSSIL FUELS

- 1) Openly seen positive action to reduce burning of fossil fuels will tend to relieve the stress on the youth and concerned adults.
- 2) The atmosphere was noticeably cleaner after the COVID shutdown, which is demonstrated proof that reducing fossil fuel burning will tend to clean the atmosphere.
- 3) There is a finite source of fossil fuels:
 Stanford University"—May 23, 2019 Oil will end by 2052 30 years time, Gas will end by 2060 40 years time, Coal will last till 2090 70 years time"
- 4) The cost of energy is crippling economies.

MONETARY BENEFIT OF APPLYING THE INVENTION

U.S. ENERGY INFORMATION:

"Globally we burn 97 million barrels a day. That represents a global cost of approximately **\$6.9 trillion per day.**"

Yale University

"Feb 12, 2020 — Air Pollution from Fossil Fuels Costs \$8 Billion Per Day ... The cost represents 3.3 percent of global GDP, "

NOTE: An internationally patented invention exists that has the potential to reduce global fossil fuel burning by more than 33%.

If only 33% of the total fossil fuel use is prevented, the global cost avoidance would be **\$832 billion per year**.

THE MAIN HURDLE

Governing authorities in government, multiple universities and large environmental organizations have all rejected the invention with no technical arguments addressing the invention's actual design drawings.

Repeatedly, when the opposing authorities come to the realization that the invention claims are true, they take a no contest position and terminate communication.

THIS PAPER IS INTENDED TO BRING CONCERNED AND OPEN MINDED PERSONS TO:

- 1) Understand that a lesser volume of hydraulic fluid can generate a larger volume of hydraulic fluid at equal pressures.
- 2) Understand that applying the accepted scientific formulae ($W = P\Delta V$ and W = FD), concludes with work output exceeding work input, which contradicts conventional knowledge.
- 3) Understand that a patented invention allows a hydraulic system to produce clean energy.
- 4) Realize there is some HOPE for the future if their collective voices are heard.



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NOTE: The link at the bottom of the page takes you to the European Patent Office, where you can open the full patented information.

RSS: family dossiers

Espacenet

Family list: US2002178719 (A1) - 2002-12-05

7 application(s) for: US2002178719

1. Diamond-sha	aped fluid powere	ed linkage,	system and er	igine	
Inventor: STRAIN DAVID [CA]	Applicant: STRAIN DAVID	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F16D31/02	Publication info: US2002178719 (A1) 2002-12-05 US6782800 (B2) 2004-08-31	Priority date: 1999-12- 21
2. DIAMOND-SI	HAPED FLUID PC	WERED LI	NKAGE, SYST	EM AND ENGINE	
Inventor: STRAIN DAVID [CA]	Applicant: STRAIN DAVID [CA]	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F15B3/00	Publication info: AT280331 (T) 2004-11-15	Priority date: 1999-12- 21
3. Diamond-sha	aped fluid powere	ed linkage,	system and er	<u>igine</u>	
Inventor: STRAIN DAVID	Applicant: STRAIN DAVID	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F15B3/00	Publication info: AU2336801 (A) 2001-07-03	Priority date: 1999-12- 21
4. DIAMOND-SI	HAPED FLUID PC	WERED LI	NKAGE, SYST	EM AND ENGINE	
Inventor: STRAIN DAVID [CA]	Applicant: STRAIN DAVID [CA]	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F15B3/00	Publication info: CA2424712 (A1) 2001-06-28 CA2424712 (C) 2007-11-20	Priority date: 1999-12- 21
5. DIAMOND-SI	HAPED FLUID PC	WERED LI	NKAGE, SYST	EM AND ENGINE	
Inventor: STRAIN DAVID [CA]	Applicant: STRAIN DAVID [CA]	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F15B3/00	Publication info: DE60015181 (T2) 2005-11-24	Priority date: 1999-12- 21
6. DIAMOND-SI	HAPED FLUID PC	WERED LI	NKAGE, SYST	EM AND ENGINE	a section
Inventor: STRAIN DAVID [CA]	Applicant: STRAIN DAVID [CA]	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F15B3/00	Publication info: EP1240435 (A1) 2002-09-18 EP1240435 (B1) 2004-10-20 <u>Global Dossier</u>	Priority date: 1999-12- 21
7. DIAMOND-SI	HAPED FLUID PC	WERED LI	NKAGE, SYST	EM AND ENGINE	
Inventor: STRAIN DAVID [CA]	Applicant: STRAIN DAVID [CA]	CPC: F15B3/00	IPC: F15B3/00 (IPC1-7): F15B3/00	Publication info: WO0146594 (A1) 2001-06-28 <u>Global Dossier</u>	Priority date: 1999-12- 21

European patent office link

Ministry of the Environment. **Conservation and Parks**

Climate Change Policy Branch 438 University Avenue 14th Floor Toronto ON M7A 2A5

Ministère de l'Environnement, de la Protection de la nature et des Parcs



Direction des politiques en matière de changement elimatique 438, avenue University 14° étage Toronto ON M7A 2A5

NOTE: The second and third paragraphs are typical responses of all the government Ministries, universities and environmental organizations we have approached.

All showing concern, but none willing to investigate this patented design, offered at no charge. This letter is from the CLIMATE CHANGE POLICY BRANCH.

357-2023-2479

January 10, 2024

Dave Strain Email: analystsoloneumatic@bellneLca

Dear Dave Strain:

Thank you for your email to the Office of the Honourable Andrea Khanjin, Minister of the Environment, Conservation and Parks, sharing details regarding your invention. I am responding on the minister's behalf.

Please note that the Ministry of the Environment, Conservation and Parks does not currently assess and offer support to technological proposals or inventions. I have forwarded the details of your presentation to ministry staff for their awareness.

Climate change is a serious global problem that presents challenges for our air, water and lands. The Ontario government recognizes both the threat posed by climate change and our responsibility to act.

Ontario has already achieved greater reductions of greenhouse gas (GHG) emissions than any other province or territory in Canada. The majority of Canada's progress toward its 2030 Paris Agreement target has been driven by Ontario. Ontario is currently on track to achieve its 2030 GHG emissions target with 2021 greenhouse gas emissions down 26.1 per cent since 2005. For a full update of Ontario's progress on the environment, and on climate change specifically, please visit this link.

Thank you again for writing and sharing your commitment to sustainability and climate action. I wish you continued success in your work and research.

Sincerely,

Patrick Fancott Digitally signed by Patrick Fancott Date: 2024.01.10 23:48:00 -05'00'

Patrick Fancott Director, Climate Change Policy Branch Ministry of the Environment, Conservation and Parks

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SCIENTIFIC CONSIDERATIONS FOR A PATENTED CLIMATE CHANGE SOLUTION

1) The fundamental science is the discovery of a hydraulic actuator that is more efficient than standard pistons, first patented in 1874 by Mr. Reilley, US patent #147,519. (Logic illustration on page 10)

Another style of more efficient hydraulic actuator was patented in 1999 by Mr. Strain, founder and President of APS.

The efficiency differential has been empirically confirmed by current scientists/engineers.

Patent offices' link:

https://worldwide.espacenet.com/inpadoc?submitted=true&DB=EPODOC&CC=US&NR=2002178719&KC=&F

- 2) The more efficient hydraulic actuator produces more work than a standard piston when each is supplied identical volumes of fluid at the same pressure.
- Conventional knowledge has been incorrect before: the sun does not orbit the world and the world is not flat.
 Applying this efficiency differential in the 1999 patent challenges conven onal knowledge.
- 4) Opposing views have been based only on opinions with no supporting technical arguments addressing the inventions actual design. Quotes from scientist/engineers in APPENDIX "A" on page 15.303 in APS manual linked the next page. The saying "Extraordinary claims require extraordinary evidence" (sometimes shortened to ECREE), also known as the Sagan standard (From Wikipedia), should apply to both sides in any scientific debate:
 - > APS has provided full empirical scientific evidence to multiple opposing scientist/engineers.
 - The "Sagan Standard" has been quoted by some scientists as refutal of this invention, while refusing to look at the "extaordinary evidence." This is not a scientific response.
 - Opposing opinions of blocking authorities are standing only on unconditional acceptance of the Laws of Thermodynamics from the mid-1800's, not emperical science or technical logic.

5) This climate change opportunity will die without the informed support of concerned persons.

CONSIDERATION

Stanford University predicts humanity will run out of fossil fuel within the life time of children living today.

These children will face hell on earth with their children if real solutions are not activated very soon.

APS's experience with government Ministries and large environmental organizations indicates they are not interested in assessing technical advancements that address climate change.

A quote from Brian Kelley who was the Sustainability Manager for the Region of Durham, Ontario, Canada.

Mr. Kelley resigned his position contesting the Region's lack of support in presented sustainability proposals.

QUOTE

"More to the point, do you want to have to explain to your own children or grandchildren why you lacked the courage to protect their futures?"

A PATENTED CLIMATE CHANGE SOLUTION EXISTS BUT IS BEING IGNORED/DISMISSED

STEPS TO UNDERSTANDING THE SCIENCE

 Confirm that a more efficient hydraulic actuator and its application to address climate change are internationally patented and have received confirming peer reviews by several scientist/engineers. The patent offices' link is on page 1.

Some scientist/engineers who witnessed the demonstration models and confirmed the efficiency advantage of Mr. Strain's patented actuator over standard pistons are:

- -1- Donald M. Gorber, Ph.D., P.Eng.-- (See pages 13.276 13.277 in the APS Training Manual)
- -2- Rajendra K. Singh, Ph.D. ----- (See pages 13.278 13.279 in the APS Training Manual)
- -3- Rosalie Bertell, Ph.D., GNSH
- -4- Robert Blanchard, P.Eng. ------ (See pages 13.290 13.282 in the APS Training Manual)
- -5- Dr. Mile Ostojic, P.Eng., NRC
- -6- Phillip Sullivan, Ph.D., P.Eng.
- -7- Support documentation is available upon request.

APS Training Manual available on the APS WEBSITE link: https://www.apscontrols.org

- 2) Accept or reject these basic claims of the invention with empirical science:
 - Pistons can be applied in two ways:
 - ✓ To perform work as with lifting the box on a dump-truck.
 - ✓ To produce pressurized substance as with a bicycle or a balloon pump.
 - A more efficient and stronger hydraulic piston can pump fluid out of an opposing weaker hydraulic piston with both pistons at the same fluid pressure, similar to a balloon pump.
 - With two opposing hydraulic pistons with different efficiencies, the more efficient piston can pump more fluid from the less efficient piston in a volume greater than the more efficient piston requires at the same pressure. (illustrated on page 4)
- 3) The conclusion of #2 is that a lesser volume of fluid can generate a larger volume of fluid at identical pressures. Applying the formula Work = Pressure X Volume change (W = $P\Delta V$) concludes that the Work output of the less efficient piston is more than the Work input of the more efficient piston. ($W_{out} > W_{in}$).

This empirically proven fact contradicts conventional knowledge.

COMPARING THE FUNDAMENTAL SCIENCE OF THE COMBUSTION ENGINE TO THE DIAMOND-SHAPED ACTUATOR

1) The fundamental science of the *Combustion Engine* is the force generated by the explosion when vaporized gasoline and a spark meet.

The work potential of that explosion ending up as power to turn the vehicle's wheels is just the application of known nuts and bolts solutions beyond the scientific fact.

2) The fundamental science of the *Hydraulic Displacement Engine* is the efficiency differential comparing a conventional piston to a Diamond-Shaped Actuator.

The work potential differential generated by the efficiency differential ends up powering the *Hydraulic Displacement Engine* and also produces electricity or other work functions.

This is just the application of known automatic control nuts and bolts solutions beyond the scientific fact.

HYDRAULIC DISPLACEMENT ENGINE EFFICIENCY ADVANTAGE LOGIC

Many scientists/engineers have tested the actual model confirming that the Diamond-Shaped Actuator (DSA) is >15% more efficient than a conventional piston and tested the model that proves that <5% efficiency differential is required for the DSA to produce its full fluid requirement by pumping the fluid from the conventional piston.

This leaves the >10% efficiency differential available for other work in part of each forward stroke, which allowed the development of the *Hydraulic Displacement Engine*.

APS developed advanced HVAC control logic reducing some buildings' energy consumption by > 50%. In total, APS's three-man crew prevented over \$100 million in fuel costs. (> 60,000 person-years of pollution)

Using similar automatic control concepts, APS designed a system that confirms that the basic science can be applied in a functioning machine to produce surplus energy. The control circuit was peer reviewed by a SIEMENS controls expert and he initialed and dated all of the design drawings with no challenges.

Full details are presented on pages 13.305-13.310 of the APS Training Manual.

Challenging established world views is very uncomfortable, but it is good science.

This invention has the potential to assist with mitigating climate change as per last paragraph of Dr. Gorber's review; therefore, should not be arbitrarily dismissed by others, with no technical explanations supporting their positions. (See page 13.277 of APS Training Manual)

ACTUATOR EFFICIENCY COMPARISON A PISTON TO A DIAMOND-SHAPED ACTUATOR (DSA)



COMPARISON

-1- Piston one and the (DSA) both displace 10 IN³ of fluid from piston two during these actions.

-2- Piston one and the DSA each exert a 120 pounds of force against the 100-pound counterforce of piston two.

-3- Piston one requires 20% more fluid than the volume displaced from piston two during this action. (21N³ more must be added.)

-4- The DSA requires .01% less fluid than the volume displaced from piston two during this action. (.01 IN³ must exit.)

-5- Piston one cannot satisfy its fluid volume requirement with the displaced fluid of piston two.

-6- The DSA can satisfy its total fluid volume requirement with the displaced fluid of piston two with surplus fluid available.

-7-Part of the DSA's 20% surplus work must overcome the system's power requirements and frictional losses, while running itself.

-8- The remaining power can generate external mechanical work such as driving a generator to produce electricity.

WORK = PRESSURE TIMES VOLUME CHANGE (W= $P\Delta V$)

APPLYING THE FLUIDIC FORMULA W= $P\Delta V$

WORK OUT PUT > WORK INPUT (W_{OUT} > W_{IN})



- 1) The work input is the Diamond-Shaped Actuator (DSA) fluid change volume of 9.99 IN³ through 1" of travel.
- 2) The work output is the volume of 10 IN³ of fluid pumped out of the piston through 1" of travel.
- 3) Both the piston and the DSA volumes are at 10 PSIG pressure.
- 4) Applying the formula $W = P\Delta V$, the work output is 100 in-lb and the work input is 99.9 in-lb.
- Conclusion: The formula W= PΔV proves that in this mechanical configuration Work output can exceed Work input (Wout > WIN).

NOTE:

The magnitude of the benefit is much greater than $W = P\Delta V$ illustrates, as determined by applying the Work Formula W = FD presented on page 6.

WORK = FORCE TIMES DISPLACEMENT (W = FD)

WORK OUTPUT > WORK INPUT $(W_{OUT} > W_{IN})$ APPLYING THE WORK FORMULA (W = FD)



- 1) The Diamond-Shaped Actuator (DSA) overpowers the piston through 1" of travel with 117# of force, equaling 117 in-lb of work, as proven with apparatus presented in IMAGE 1 on page 7.
- 2) The piston resists the DSA through 1" of travel with 100# of force, equaling 100 in-lb of work.
- 3) Applying the formula W = FD to the piston and the DSA, the DSA has 17 in-lb of work potential remaining through the 1" of travel.
- 4) The DSA can provide its total fluid requirement by pumping it from the piston and have work potential remaining.

NOTE:

This remaining work potential allowed the development of the Hydraulic Displacement Engine that runs itself with no energy input other than the initial pressurization and produce completely clean mechanical work, assisting with the battle against climate change.

DEMONSTRATION MODELS OF THE INVENTION

The DSA which is >15% more efficient than a piston creates energy by forcing fluid out of a piston, in a volume of fluid greater than the DSA requires, at the DSA's required pressure using < 85% of the DSA's work potential.

The remaining work potential allowed the patented development of a machine that provides its own energy to reciprocate and produce clean surplus energy for external purposes.

This invention's energy output is controllable by varying the air pressure in the cushion tank shown in IMAGE 3 and the performance impact of varied static pressure is presented in IMAGE 4.

IMAGE 1



DSA

IMAGE 2



PISTON

DSA replaces opposing piston, creating an efficiency differential.

TEST MODEL PROVING THE >15% EFFICIENCY ADVANTAGE OF THE DIAMOND-SHAPED ACTUATOR (DSA) OVER A PISTON

TEST MODEL PROVING <5% EFFICIENCY ADVANTAGE IS REQUIRED TO FORCE MORE FLUID OUT OF AN OPPOSING PISTON THAN THE DSA REQUIRES IN THIS ACTION



TEST MODEL PROVING THE RUNNING CIRCUITRY OF A RECIPROCATING MACHINE THAT PROVIDES ITS OWN SOURCE OF ENERGY TO RUN AND PRODUCES ENERGY TO BE USED EXTERNALLY FOR OTHER PURPOSES IMAGE 4



GRAPH ILLUSTRATING THAT THE ENERGY OUTPUT OF THE RUNNING MODEL IN IMAGE "3" IS PROPORTIONALLY VARIABLE WITH THE PRESSURE IN THE BLUE CUSHION TANK

A PATENTED CLIMATE CHANGE SOLUTION APPLYING HYDRAULIC EFFICIENCY DIFFERENTIALS



LOGIC PATH TO UNDERSTANDING THE SCIENCE

Hydraulic pistons use pressurized fluid as their energy source to develop force through a distance; therefore, produce work. (W = FD)

There is a new style of patented hyd raulic piston named the Diamond-Shaped Actuator (DSA) that is more efficient than standard pistons.

The DSA, with less fluid volume change than a piston, at equal pressures, produces more work than a piston.

As illustrated above, the weaker piston's force (F2) opposes the DSA's greater force (F1); therefore, the DSA overpowers the piston. Fluid is forced out of the piston; therefore, the DSA feeds itself by using the piston as a fluid pump.

When the stronger DSA forces more fluid from the weaker piston than the DSA requires for that action, the surplus fluid exits the system. This surplus fluid is pressurized; therefore, equals surplus work.

The fluid volume entering the DSA is the work input. The fluid volume exiting the piston is the work output. The fluid pressures in both the DSA and piston are equal.

Applying the scientific formula for pressurized fluids Work = Pressure X Volume change (W = $P\Delta V$) to the lesser volume change in the DSA and to the larger volume change in the piston concludes Work input is less than Work output. (W_{in} < W_{out}) The work increase is >15% applying the formula W = FD.

The efficiency of a standard piston compared to that of a DSA allowed the development of a patented machine that can run itself and provide external energy with no energy input other than the initial pressurization.

The empirical science, positive peer reviews and patents are being dismissed by governing authorities only based on unconditional acceptance of the Laws of Thermodynamics with no technical arguments.

For the sake of (a) reducing climate change worries, (b) the environment and (c) scientific integrity, empirical science should prevail over unquestioned acceptance of the Laws of Thermodynamics.

WITH HYDRAULICS, WORK OUT CAN EXCEED WORK IN (Wout>Win)

Consider two volumes of fluid "A" and "B", as illustrated below.

Volume "B" is 20% larger than volume "A".

Using the formula — Work equals Pressure times Volume change (W = $P\Delta V$) — the work (W) to produce volume "A" is 1V.

Using the formula – ($W = P\Delta V$) – the work (W) to produce volume "B" is 1.2V.

The patented invention uses volume "A" to generate volume "B".

This is achieved by using two hydraulic actuators with an efficiency differential as illustrated at the bottom of this page. Through part of its stroking range, the Diamond-Shaped Actuator (DSA) is 20% more efficient than the standard piston.

Extracting VOLUME "A" from VOLUME "B" leaves VOLUME "C".

Using the formula W = P Δ V, the work to produce VOLUME "C" is 0.2V.

This proves that **W**_{out} > **W**_{in} because a lesser volume of fluid can generate a larger volume of fluid at the same pressure.

Part of the work potential 0.2V of VOLUME "C" powers the patented invention to run itself and the remainder of VOLUME "C"'s work potential can be exported as energy to drive generators to produce electricity, etc.

NOTE: The invention can convert the work potential of VOLUME "C" from a fluid volume differential to a mechanical work differential.



7) Wout > Win.

A PRACTICAL COMPARISON REGARDING MR. REILLEY'S ACTUATOR'S FORCES

CONSIDER

This concept, first discovered by Mr. Reilley (US patent 147 519, February 17, 1874) triggered one of the most significant inventions in the last 150 years allowing a means to pollution-free energy production.

Man "A" exerts force "F1" to the underside of a folding table; however, F1 is equal to the gravitational force downward of the total load. Man "A" is stuck. TOTAL LOAD =115# FOLDING LEGS F1 = 115# F0T ANCHORED AND HINGED AT FLOOR (TYPICAL) THEN

Man "B" and man "C" got under the table and pushed with force " $F2_{up}$ ", via man "B" and force " $F3_{up}$ ", via man "C" on the folding legs as illustrated. Observation: The total load rose, bringing the legs to the extended position. TOTAL LOAD = 115#



VIDEO: https://www.youtube.com/watch?v=XOGPw7jthxc&t=4s 10

THE APPLICATION THAT RECEIVED PATENT APPROVAL

IN THE PATENT COOPERATION TREATY (PCT),

THE USA, THE EUROPEAN AND CANADIAN PATENT OFFICES

SYSTEM WITH NO PRESSURE OR ELECTRICAL



Electrical power and pressurization is initiated for drive stage (Page 13).

- The green arrows indicate fluid flow caused by the force differential between the Diamond-Shaped Actuator and the displacement piston when pressurized in the driving stage.
- The green arrows indicate fluid flow caused by the air pressure in the cushion tank in the second recharge stage (Page 15).
- The purple arrows in recharge stage one indicate fluid flow caused by the return springs when depressurized.
- The return springs have pulled the DSA back to minimum fluid volume when depressurized.

DRIVING STAGE FLUID FLOW



- The cushion tank is pressurized and electrical power is established, causing the appropriate solenoids to be energized (RED) which causes the flow pattern illustrated in green.
- The DSA's force advantage over the DP's has been empirically verified by scientists to be > 15% with the friction burdened demonstration models. An Aerospace scientist from U of T calculated a theoretical 26% force advantage in favour of the DSA over the DP with equal fluids into each.
- The DSA pumps more fluid from the DP than the DSA requires; therefore, some of the fluid pumped from the DP goes into the cushion tank.
- Of the > 15% force advantage the invention uses < 5% to overcome friction, rest itself and produce power to activate the solenoid function.
 The remaining > 10% is available for work functions external to the invention.
- > The DSA exerts less force as it expands; therefore, the drive stage stops at about 20° expansion.
- (See page 13.255 in the APS Training Manual for full details.)

FIRST RECHARGE STAGE FLUID FLOW PATTERN



- The cushion tank is isolated while maintaining its pressure.
- The DEPRESSURIZATION PISTON, which has a lowpressure range return spring, is opened to the common fluid of the DSA and the DP, which depressurizes the fluid coloured purple.
- This eliminates the DSA's force advantage.
- The return springs at the DSA and the DEPRESSURIZATION PISTON's spring retract causing their fluid gain to return to the DP.
- \blacktriangleright 1% of the DP's initial fluid is still in the cushion tank.
- > The return springs have pulled the DSA back to minimum fluid volume when depressurized.
- See page 13.256 in the APS training manual for full details.



- ➢ 99% of the fluid returned to the DP from the DSA and DEPRESSURIZATION PISTON in the first recharge stage.
- The fluid flow pattern illustrated in green returns the 1% of the fluid to the DP from the cushion tank.
- When 100% of the fluid is returned to the DP the circuit automatically restarts the drive stage.
- The invention's cycling performance graph is presented on page seven, IMAGE 4.
- See page 13.257 of the APS Training Manual for full details.

A TEACHING OPPORTUNITY TO TEST THE LAWS OF THERMODYNAMICS

A FIRST STEP IN IMPROVING SCIENCE SHOULD BE CORRECTING FALSE LAWS

The scientific community has accepted the Laws of Thermodynamics as irrefutably true.

Refuting this invention is an opportunity to establish further confidence in the Laws of Thermodynamics.

Quoting the Laws of Thermodynamics as proof to defend those laws is unacceptable circular reasoning.

Empirical science should prevail with technical arguments addressing the actual design of the invention.

Concerned persons should consider the information on pages 13.300 to 13.304 in the APS manual.

THE INVENTION'S CLAIMS TO BE REFUTED AS A LEARNING PROCESS FOR STUDENTS

1) A lesser volume of fluid can generate a larger volume of fluid at equal pressures with work potential remaining.

Applying the formula $W = P\Delta V$ to the larger and smaller volumes of pressurized fluids proves the fact that a lesser amount of work can generate a larger amount of work.

2) The differential in work potential allowed the patented development of a hydraulic machine than can produce more energy than it requires to run itself and have surplus energy to be applied externally.

APS's offers to share the invention and solutions are being dismissed by organizations presenting themselves as leaders in the climate change battle. Your assistance is needed.

POSSIBLE ACTIONS TO ASSIST WITH THIS CLIMATE CHANGE SOLUTION

 Ontario's CLIMATE CHANGE POLICY BRANCH response to the free offer of climate change solutions: "Please note that the Ministry of the Environment, Conservation and Parks does not currently assess and offer support to technological proposals or inventions."

Email the Ontario Climate Change Policy Branch Office and request that they publicly assess this freely shared invention plus the HVAC advancements in the APS Training manual. (Linked page 1)

Contact the Minister of Environment, energy and climate change, both provincially and federally as well as your MPP and MP requesting publicly open communication be established regarding these solutions.

2) Major environmental organizations': Typical response to the free offer of climate change solutions: "Unfortunately we have neither the appropriate resources nor the staff capacity to assist you with your work, although we certainly encourage your efforts to find solutions."

Email environmental groups that present themselves as climate activists and request public explanations of their positions on these climate change opportunities.

- 3) Start a student organization concerned with climate change to respectfully demand that the educational system assess the climate change opportunities and publicly support practical applications.
- 4) Spread the information and share other positive actions to address climate change.

SUMMARY

1

POTENTIAL WORK (PW) A LESSER VOLUME OF FLUID INPUT GENERATES A LARGER VOLUME OF FLUID OUTPUT AT EQUAL PRESSURES: APPLYING W = PΔV Wout > WIN THE DSA PUMPS ITS OWN FLUID REQUIREMENT FROM A PISTON WITH > 15% PW REMAINING

2

3

THE INVENTION USES <5% OF OF THE >15% PW TO RUN ITSELF, WITH NO OTHER ENERGY INPUT LEAVING >10% FREE ENERGY

MULTIPLE SCIENTIST/ENGINEERS HAVE CONFIRMED THE INVENTION'S EMPIRICAL CLAIMS.

PATENTS WERE GRANTED IN THE EUROPEAN, USA AND CANADIAN PATENT OFFICES.

THE SOLUTION IS BEING IGNORED BY GOVERNMENT AND UNIVERSITY AUTHORITIES BASED ONLY ON

UNWILLINGNESS TO QUESTION THE LAWS OF THERMODYNAMICS.

NO TECHNICAL ARGUMENTS DISPUTING THE ACTUAL INVENTION HAVE BEEN PROVIDED.

WITHOUT RESPECTFUL AND ORGANIZED CHALLENGE OF KNOWLEDGEABLE YOUTH AND ADULTS

THIS CLIMATE SOLUTION WILL DIE.

FOR MORE INFORMATION SEE SECTION 13 IN TRAINING MANUAL FOUND AT https://www.apscontrols.org