Voit: Nelson's Choice - Double hose regulators

uring the early 1950s the embryonic American recreational scuba diving market started to rapidly expand. The first and most widely produced scuba units were those of the U.S. Divers company, based in Los Angeles, California. The company had the benefit of being allied to the French company, La Spirotechnique, which held the patents for the Cousteau-Gagnan Aqua Lung that was introduced into the American market in 1948.

At that time the sport of spearfishing was already established, and some of the masks and fins used in that sport were being manufactured by the Voit Company, for their clients Owen Churchill and the Sea Net Company. As the Sport began to grow, Voit became more engaged and would eventually produce a series of regulators and other equipment to challenge U.S. Divers' dominance. Voit's rise to prominence would not come through super salesmen, but through a Hollywood actor and a television show called Sea Hunt.



In 1951, American divers got their first national publication dedicated to recreational diving, The

Skin Diver magazine, and Voit took out an advert in it. Although The Skin Diver primarily contained articles on spearfishing, scuba diving would soon eclipse that sport as the prime content and focus of the magazine. This scuba content preached the scuba sermon to the choir, but the bigger market was the congregation the American general public. The new Sport engaged this congregation via articles in the main-stream media and early books, such as Diving To Adventure and The Silent World, but to a much wider extent by movies and TV shows from Hollywood. The 1956 movie Underwater, starring Jane Russell, and television's Kingdom of the Sea featuring Zale Parry, both featured Voit products, but it was Lloyd Bridges, starring as Mike Nelson in TV's Sea Hunt that pushed Voit to the front of the pack.

The popularity and influence of the Sea Hunt series and comic books ensured that Voit products would eventually become collector's items, and Voit scuba regulators undoubtedly now have the second largest following of collectors, with U.S. Divers regulators being the first. Much is already well documented about the Voit two hose regulators in Basic Scuba by Fred Roberts, and in articles published in Skin Diver magazine. Today many collectors share information via email and there are discussions on internet threads and blogs. Many collectors display their collection of Voit regulators on personal web sites which often supply additional information on Voit history. All this information helps preserve Voit's history and gives future Voit researchers and collectors great resources. The following article presents some of my research into Voit double hose regulators.

VOIT'S SCUBA EQUIPMENT LINE

William J. Voit of Worthington, Indiana founded his sporting goods company in 1922. The company specialized in rubber products and Voit developed and patented a process for making inflatable balls better and faster through automation. This helped to meet the ever-increasing demands for sports balls, and Voit would eventually become one of the oldest rubber sporting goods companies in the world.

During the 1940s Voit was making rubber goods for water sports as well, such as fisherman's

inflatable boats, floats and hip waders. These product lines attracted the attention of the early skin diving companies like Owen Churchill and Sea-Net Company, who contracted Voit to manufacture masks and fins for them. In 1946 William's son, Willard Voit, would take the reins of the company and by the 1950s Voit had their own line of masks, fins and accessories, and with Rene Sports, Sea Net, and Fisher Sporting Goods was one of the first four equipment suppliers to advertise in the premiere issue of The Skin Diver magazine in December 1951.

By the mid-1950s Voit was witnessing the fast growing interest in recreational diving, and the company chose to add scuba gear to their line of spearfishing accessories. They achieved this by making a gentleman's agreement with U.S. Divers, and were allowed to use two patented regulator designs: the DA Navy approved two stage, and the DW overpressure breather single stage.

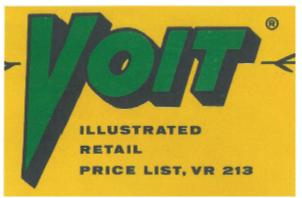
The engineering team at Voit made slight changes to these to signature their regulators.

To customize the two regulators, Voit designed the front regulator cover, with six symmetric indents to give a star type appearance around a center circle where the label would go. The regulator cover was chrome plated over brass. The rest of the exterior regulator parts would be brushed nickel chrome and sealed with seven box clips. A green colored round label was placed in the center circle. Since Voit made hoses of all types for other industries, they chose to custom color their hoses, and the Kleer E-Z mouthpiece and Tinnerman clamps, by coloring them a near forest green, making it their signature color, which was included in their logo.

VOIT ANNOUNCE ITS FIRST REGULATOR, THE VOIT LUNG

By November 1955 Voit had printed their first color catalog which would debut their 1956 product line, which included two Voit Lung regulators. The VR1 (Voit Regulator 1 stage) and the VR2 (Voit Regulator 2 stage).

To further promote the Voit scuba line, The Skin Diver magazine featured them in the New Products column, in the February 1956 issue.



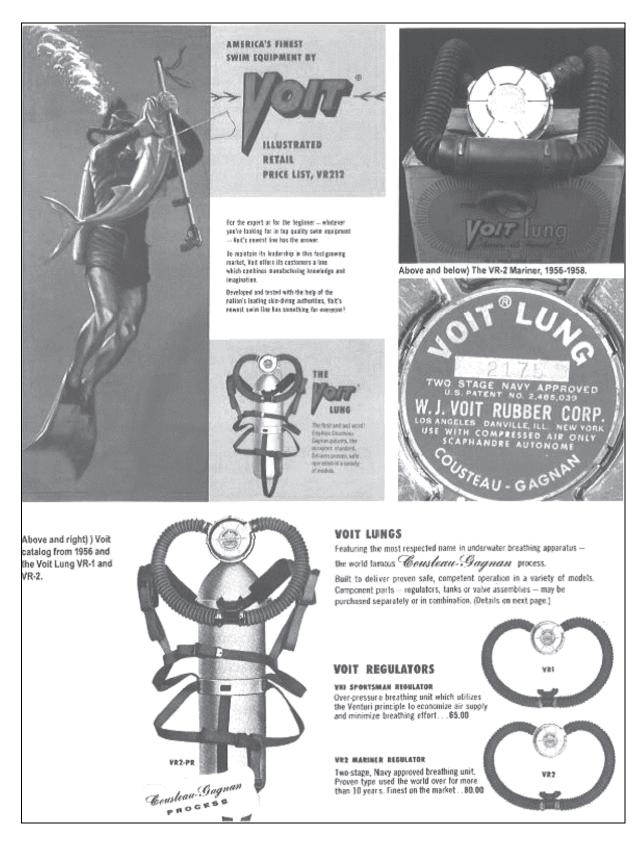






THE VOIT LUNG VR2

The label of the Voit Lung VR2 reads "VOIT LUNG two stage Navy approved, W.J. Voit Rubber Corp." and includes each of the company's three US locations. It also includes Scaphandre



Autonome, the US patent number and Cousteau-Gagnan as required by the agreement with U.S. Divers. Each VR2 regulator has a 4-digit serial number stamped on the label. The two stage

mechanism is an upstream push-to-open first stage and a downstream lever lift off seat second stage.

The following year, 1957, Voit gave the VR2 a name calling it the Mariner, though it was never



printed on the label or anywhere else on the regulator. It was a flashy name for advertising purposes and easy identification for the catalog. The VR2 Mariner would have a three-year run from 1956 through 1958. To date I have verified serial numbers starting with 1031 and ending at 2674.

Those figures indicate that 1,643 Mariner green label VR2 regulators were manufactured for certain. If you were to assume that Voit started with serial number 1001, it may mean only 2,000 or less were manufactured.

THE VOIT LUNG VR1

The label of the Voit Lung VR1 reads VOIT LUNG over pressure breather W. J. Voit Rubber Corp. and includes each of the company's three US locations. It also includes Scaphandre Autonome, the US patent number, and Cousteau-Gagnan as required by the agreement with U.S. Divers. Each VR1 regulator has a 4-digit serial number stamped on the label. The mechanism is an upstream push, to open the high pressure single stage, with a small orifice pointing several degrees left of the air delivery opening. In the following year, 1957, Voit gave the VR1 a name calling it the Sportsman, though it was never printed on the label or anywhere else on the regulator. Again, a flashy name for advertising purposes. The VR1 Sportsman would have a three-year run from 1956 through 1958.

To date I have verified serial numbers starting with 5,072 and ending at 8,027. Those figures indicate that 2,955 Sportsman green label VR1 regulators were manufactured for certain. If you were to assume that Voit started with serial number 5001, it means that around 3,000 + regulators were manufactured.

Voit would do well with their new scuba product lineup during their first three years, due to the wide national distribution in sporting goods stores. Sales got a boost when the movie Underwater was released, starring Jane Russell. The entire cast wore Voit Churchill fins, and co-star Richard Egan endorsed the fins in an advert for Voit.

Around the same time, television was airing a half hour documentary program called Kingdom of the Sea, hosted by Bob Stevenson and narrated by John Craig. From the mid-1950s and well into 1958 HDS Advisory Board member Zale Parry would have many appearances in the series. Voit provided the masks and fins for the show, and later when their Volt Lung became available Zale would use the entire Voit scuba line in the show.

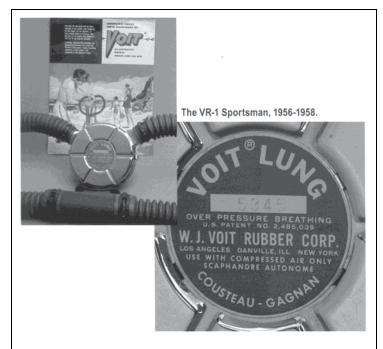
Voit's biggest promotional break came in 1958 when the TV series Sea Hunt, staring Lloyd Bridges as Mike Nelson, was launched. The company provided all of the skin and scuba diving equipment for all divers in the show. Lloyd (alias Mike) would become a big influence on the viewing public and Voit got a very big boost in exposure and ultimately sales.

Lloyd was seen using both of the Voit Lung green label models, and they appeared in many of his publicity stills.

In the earlier Sea Hunt episodes, the one stage Sportsman regulator with green hoses and mouthpiece was used. Later, in 1959, Lloyd would be seen using the newer design one-stage Sportsman, with blue label, gray hoses, mouthpiece and chrome Tinnerman clamps. By 1961 he may have used the 50 Fathom VCR-2 model, but I have not been able to confirm that. Voit paid Lloyd for their advertising campaigns since Sea Hunt became such a huge national phenomenon.

VOIT IS PURCHASED

During 1958 W. J. Voit Rubber Corporation was purchased by American Machine and Foundry,





Zale Parry with Voit equipment, 1958.

Voit Products On Television

Lovely Zale Perry, during one of her many appearances on "Kingdom of the Sea" the television program that has done such excellent work in bringing undersea adventure and education to countless millions of Americans. VOIT equipment, displayed, is used in the series. The VOIT Company is one of the pioneer producers of quality skin diving equipment and is an avid supporter of family diving as recreation for everyone. "If you like to swim you'll love skin diving".

who traded under the initials AMF. American Ma-

chine and Foundry was founded in 1900 and was once one of the largest recreational equipment companies in the United States. To expand its product line in the recreational market AMF acquired Voit, golfing equipment company Ben Hogan Co. and Wen-Mac Corporation, who produced engine-powered toy airplanes. Voit would now operate as a wholly owned independent subsidiary of AMF.

The first AMF logo alongside the Voit logo can be found on the 1959 Voit catalog, and in 1960 the two logos are on catalogs and in advertisements, but would not be seen on scuba regulators until 1962.

In 1959 AMF Voit would make changes in their two hose regulator lineup. The VR2 Mariner was eliminated, and no two stage, two hose regulators would be offered. The VR1 would undergo cosmetic changes, and a new Voit regulator would have its debut. The VR1 Sportsman regulator would have a renewed one-year run in 1959 with a blue label and other cosmetic changes. First, the cover was changed from chrome to a flat nickel chrome, like the body. The label color was now dark blue, the Tinnerman clamps chrome plated, the hoses and mouthpiece gray in color and the mouthpiece took on a new shape with Voit printed on it, making the Sportsman blue label a very nice looking regulator. The interior mechanism was upgraded by using the U.S. Divers DW Mistral.

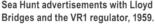
To date I have verified serial numbers starting with 8530 and ending with 8953. Those figures indicate that 423 Sportsman blue label VR1 regulators were manufactured for certain. If you assume that Voit started with serial number 8501, it may mean that as few as 500 regulators were manufactured.

THE NEW AMF VOIT REGULATOR 50 FATHOM

In 1959 the two hose Voit Compensated Regulator, VCR-2, had its debut and was the first wholly designed













and engineered regulator by the Voit team. The presentation of this new regulator was spectacular, with cover and body painted a piercing blue color surrounded by a polished stainless band to clamp cover to body, a dark blue label, gray hoses and mouthpiece, and all the Tinnerman clamps were chromed.

The dark blue label was printed with VOIT 50 FATHOM, which related to the regulator successfully passing tests to 300 feet in tank tested dives. Also on the label was the word COMPENSATED and a line stating easy breathing at all depths, which was something no other company ever boasted on its label. W.J. Voit Rubber Corp. and the company's three US locations were also included on the label. There were no serial numbers stamped on the label, nor was there any printed credit to the Cousteau-Gagnan patent pending, since all parts of the regulator were now engineered by Voit Corporation. The mechanism was a single stage downstream (pull to lift off seat by lever action). Advertising boasted the fact that there were fewer moving parts, and easy breathing at all depths was the 50 Fathom's signature. In 1960 the 50 Fathom would be added to the Viking line of mask, fins, spear guns and a new single hose regulator called VCR-1 Viking 40 Fathom. However, the name Viking would never appear on the label or anywhere else on the regulator. This

beautiful 50 Fathom Viking regulator painted blue would remain on the market for only two years.

THE 1961 50 FATHOM

The Viking 50 Fathom now sported a chromed front cover on a brushed nickel chrome body, sealed with a polished stainless band. The label is identical to the earlier model and interchangeable since there is no serial numbers on it. Gray hoses and mouthpiece were now clamped with unbreakable nylon clamps, and customized with a Voit monogram.

The same VCR-2 mechanism was used in this 1961 model and would be manufactured just that one year. It is worth noting that AMF Voit would no longer use the Tinnerman clamp for any of its future models.

Because Voit did not serialize any of the 50 FATHOM regulators that we know of, we can only speculate how many were made.

As Voit did not offer a two stage, two hose regulator for the years 1959 through 1961, and also did not have the VR1 regulator on the market for 1960 and 1961, it is not unreasonable to calculate that they would have made at least 1,000 to 1,500 50 Fathom regulators per year. That calculation gives the possibility of between 2,000 to 3,000 manufactured in total for the blue painted









Six-digit number found in VCR-2. Courtesy Vintage Scuba Supply.







V22 Polaris (1962-1963). The name Polaris comes from the celestial stars meaning pole star, or northern star, being the brightest star in the constellation. Notice the gleaming star on the label in the name Polaris.

Actor Adolfo Celi in Thunderball with Polaris regulator.

model. The same calculation applied to the 1961 chromed model equates to between 1,000 and 1,500 regulators manufactured, making it the scarcer model for the 50 FATHOM "Viking" regulator. Judging by what I have tracked and documented in auctions, the ratio appears to hold true.

However, a six digit numbered sticker has been seen on the inside cover of a chromed 50 Fathom and other collectors have reported seeing evidence of where a sticker had once been in examples of this model. Since the six digit nomenclature is so large, it does not follow any logic that it represents the quantity of regulators manufactured. It does not seem to be a date sequence, or relate to any parts list that might have that kind of numbering. Until more information is reported, so a database of how these numbers change can be established, their purpose remains unknown.

THE POLARIS, THE NAVY, AND THE BLUE FIFTY FATHOM

In 1962 the AMF Voit engineering staff designed another mechanism and called it the V22. It is a one stage push-to-open, with a deluxe venturi assist for quick delivery, with minimum moving parts and a simple lever adjusting system. This mechanism was placed in the same case body used for the Viking chromed 50 Fathom, and came with a stainless band, gray hoses, and mouthpiece, and the custom vinyl clamps.

The label reads Polaris 50, AMF VOIT and made in USA, and was also serialized with a 4 digit number. The Polaris 50 was featured in the Voit catalogs of 1962 and 1963.

To date I have verified serial numbers starting with 0098 and ending at 2689. Those figures indicate that 2,591 V22 Polaris 50 regulators were manufactured for certain. If you were to assume that Voit started with serial number 0001, it means 2,690 regulators were manufactured, with a probability of dose to 3,000 actually manufactured for the two-year production run.

The Polaris regulator was used in the movie Thunderball by Emilio Largo (actor Adolfo Celi) and his SPECTRE crew. Thunderball came out in 1965, two years after the regulator ended production. AMF Voit Swimaster got lots of exposure since all scuba equipment used in the movie was theirs, helping sales to continually grow. Now collectors seek out the Polaris in part because of the movie. (see photo of Emilio Largo with Polaris)

THE AMF VOIT V66 NAVY

Voit had no two stage double hose regulator in their lineup since the introduction of the V2 Mariner which ended in 1958. In 1962 they introduced the V66 Navy, once again getting permission from U.S. Divers to use their updated model 1010 Aqua Master mechanism. The two stage mechanism is

an upstream push to open action (unbalanced) first stage, with a lift off seat via lever action second stage, and a low pressure port access for hookah. The Navy had the same chromed cover as the 50 Fathom and Polaris, placed on a brushed nickel chrome body, and sealed with a polished stainless band, gray hoses, Voit mouthpiece and nylon clamps.

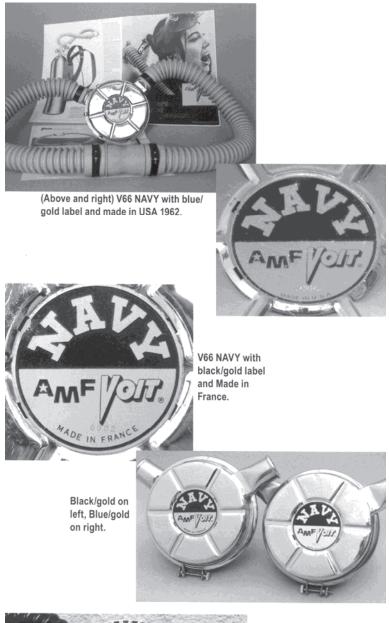
The label reads NAVY printed over blue background on the upper half and on the bottom half is AMF Voit made in USA and a four digit serial number on gold background.

Shortly after production began for the Navy regulator, Voit halted it. It seems the company was in violation of their agreement with U.S. Divers because the mechanism used in the Navy needed to be credited to Cousteau-Gagnan's patent pending. Somehow replacing the made in USA to made in FRANCE worked, and with a few cosmetic changes production resumed.

The label now had a black background on the upper half, gold on the lower half, with the AMF VOIT made in France and four digit serial number. The entire regulator exterior was now chrome plated, and the cover sealed in place with the stainless clamp. Starting somewhere around serial number 1000 Navy Regulators would have seven box clips for sealing the cover rather than the stainless clamp.

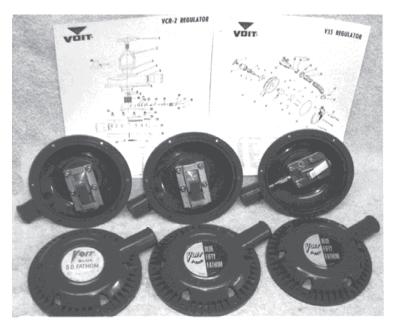
The V66 Navy would have a three-year production run, from 1962 through 1964.

To date I have verified serial numbers for the short production of the blue and gold label made in USA, starting with 0120 and ending at 0713. Those figures indicate 593 V66 NAVY with (MADE IN USA) regulators manufactured for certain. If you assume that Voit started with serial number 0001, it means that approximately 713 regulators were made before production was stopped for the Cousteau-Gagnan infraction.





Chrome prototype VCR-5, 1961.



(Above) The VCR-2 and the V55 mechanisms in Blue Fifty Fathom.

(Right) V55 Blue Fifty Fathom and V22 Polaris. This new version, called the V55, was introduced in 1962.



To date, I have verified serial numbers for the black and gold label with made in FRANCE regulators, starting with 0116 and ending with 3551. Those figures indicate that 3,435 V66 Navy regulators were made for certain. If you assume that Voit started with serial number 0001, it could mean they made around 3,500-plus units.

Counting both styles together, AMF Voit produced somewhere around 4,000 + Navy regulators during its three-year run. I noticed that AMF Voit started over with the numbering and so it would be possible to own both styles with duplicate serial numbers, (how cool would that be).

THE VCR-5 AND V55 "BLUE FIFTY FATHOM" 1961

The first Blue Fifty Fathom has the cor-VCR-5 rosionfree mechanism. in lightweight blue Cycolac plastic housing, and was first manufactured 1961. Its uniquely designed case cover and body were sealed together with chromed screws and nuts. The hoses and mouthpiece gray and had custom vinyl clamps. On the regulator's silver stick-on decal is Voit Blue 50 Fathom, an illustration of spearfisherman, and made in USA.

Manufacturing of units with this designed decal would run less than two months because Voit discovered they had failed to include AMF on the decal, and a new decal was quickly drawn up.

The new decal was now 50% silver and 50% blue color, and would have a

vertical separation rather than their traditional horizontal separation. VOIT and AMF were printed on the left side, and Blue Fifty Fathom printed on the right side with made in USA at the bottom.

A prototype regulator shows they considered adding chrome to the regulator cover and body, perhaps blue hoses, and a blue custom mouthpiece for a more substantial appeal. But, for whatever reason, they did not pursue it. One thought is that the adding of chrome would defeat the purpose of offering an inexpensive low priced regulator.

The new decal VCR-5 BLUE FIFTY FATHOM would finish out the year, before it went through another upgrade by replacing the VCR-2 mechanism with the V22 mechanism as used in the Pola-

ris model. This new version BLUE FIFTY FATHOM was called the V55 and was introduced in 1962. The regulator shown in nearly all Voit advertisements would be with the replacement design decal. I was only able to find one advertisement picturing the original decal leaving out AMF and that was in Skin Diver magazine of June 1961. The magazine would debut the regulator with the latter design of decals in its New Products page in the October 1961 issue.

The BLUE FIFTY FATHOM (in all its versions) would be available for most of 1961 and all of 1962. Unfortunately, because they did not have serial numbers we can only guess how many VCR-5 and V55 BLUE FIFTY FATHOMS were made. Looking at the production history for all other models Voit used per year, and with the fact they had three double hose regulators offered in 1962, it would not be unreasonable to say 1,000 or less were made.



AMF VOIT SWIMASTER

In 1962 W. J. Voit Rubber Corporation purchased Swimaster, which was one of the original companies from the 1950s to catalog masks, fins, knives, and spearguns for skin divers. By 1963 Voit would start adding Swimaster products such as knives and spearguns to its catalog, and in 1964 added

Swimaster masks and fins. In 1966 Swimaster would become the PRO line of scuba equipment for AMF Voit.

The TRIESTE regulator was named after the famous bathyscaphe Trieste from the 1950s and 1960s, which made a record dive to 35,797 feet in the Mariana Trench near Guam on January 23, 1960.



SWIMASTER TRIESTE R22

This regulator was the smallest and most compact two hose unit on the market, and featured all stainless steel parts. The mechanism is a two stage fully balanced unit with easy, convenient adjustment of the second stage. The regulator came with black hoses and AMF Voit mouthpiece like the earlier gray mouthpiece, and standard nylon clamps. The yoke screw was a chromed round knob. There are two access ports in the main body: one was for an optional reserve mechanism; the other, a high pressure port located on the opposite side, was for an optional pressure gauge.

The black label reads AMF Voit Swimaster, TRIESTE, with a place for the serial number, and made in USA. Along the very bottom are the words 2 stage balanced regulator. The TRIESTE had a four year run from 1966 through 1969.

To date I have verified TRIESTE serial numbers starting at 00104 and ending at 07781. Those figures indicate that 7,677 regulators were manufactured for certain, which probably means that a total of 8,000 were manufactured over the four year period.

SWIMASTER TRIESTE-J R22-J

This was the same regulator as the R22 but with the added feature of a built-in reserve mechanism cataloged as V1-JR assembly. However, it seems very few were assembled at the plant and marked TRIESTE-J on the label. I say this because of the low number of regulators I have been able to verify.

To date I have verified serial numbers for the TRIESTE-J starting at 00106 and ending at 00666.

This represents a production run of only 560 regulators, with the possibility of far less than 800 actually being made. I have not seen the two models sharing the same serial number.

It seems since Swimaster sold the reserve assembly kits for adapting the regulator at a later time if desired, they saw no need to flood the market with units factory assembled.

That makes the regulators with the "J" printed on the label considerably more scarce.



AMF Voit TRIESTE II, 1970-1972



VOIT TRIESTE II V22

This model is essentially the same as the TRIESTE but with a few minor changes. It seems that by 1970 Swimaster was now committed to the single hose regulator. The MR12 was their top dog, and so the TRIESTE was moved into the Voit line of scuba gear and renamed the TRIESTE II. The label was now light blue in color with a large print AMF VOIT and TRIESTE II, with a place for the serial number, then Made in USA, and finally along the bottom, 2 stage balanced regulator.

There was a low pressure port added on the same side as the high pressure port. On the opposite side was the plugged opening for the optional reserve mechanism V1-JR, and, finally, the yoke screw now had a plastic knob. The mouthpiece became similar in shape to that of the U.S. Divers V for a closer fit to the face, and the logo AMF Voit was printed on the front. The TRIESTE II would be available for two years.

To date I have verified serial numbers staring at 00128 and ending at 01578. Those figures indicate 1,450 regulators for certain, with a probability of 1600 + manufactured.

The TRIESTE II would be the last two hose regulator made by AMF. By 1972 both Swimaster and Voit were entirely committed to single hose regulators. The late 1970s would be hard times for AMF. They began selling off many of their subsidiaries, and in 1983 they closed their main plant in Los Angeles. Two years later AMF was sold to Minstar Inc. The Voit plant moved to Mexico where they manufacture game balls to this date. You can visit their web site at www.voit.com and dick on History.



Top is Trieste, bottom is Trieste II.

Research References

More information is available in the 1960 first edition and the 1963 second edition of Basic Scuba by Fred Roberts. There are many articles in Skin Diver magazine that include the Voit 50 Fathom—such as the February 1959 issue, the "Focus on Regulators" article by Bev Morgan in the June 1963 issue, and a regulator roundup in the January 1967 issue. The NEW PRODUCTS listing found in most Skin Diver issues, along with the many advertisements, helped to verify time periods etc. Visit Wikipedia for information about the companies and founders.

I would like to give personal thank to the following people who shared information on their personal Voit and Swimaster collections: Dan Barringer (Vintage Scuba Supply), William Baker, Karl Gehring, Les Hellewell, Don Russell, and Jerry Lang. 1

All images courtesy of the author

Ed LaRochelle

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Ed LaRochelle has main-

tained life-long interest in the development of scuba diving equipment. He curates a large personal collection of rare scuba equipment and his research includes files and production numbers on numerous manufacturers. As a longtime HDS member Ed joined the staff of The Journal of Diving History in 2008. His published articles include research into Scott, AGA, Viking, DESCO, Scubapro, Rose Pro, US Divers military non-magnetic regulators and Diluter Oxygen model AN 6004-1 regulator. He lives in the Bay Area of California.

¹ According to the original article and by courtesy of Ed LaRochelle: Voit: Nelson's Choice, A History of Voit Two-Hose Regulators. The Journal of Diving History 2011, no. 68, p. 10-19.