

RFC Dallas Flying Club

Newsletter

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rfcdallas.com

Winter 2016

What's New

Club Meetings:

In our last monthly meeting in November, **Tom Johnson** gave an excellent presentation about **ADS-B**. There is a recap of his presentation on page 4.

Our speaker for the next meeting is **Charles Mayo, a Pipeline Patrol Pilot**. He will share what it's like to fly 300 AGL for hours at a time, among other aspects of pipeline flying.

RFC monthly meetings are held the **3rd Tuesday** of each month (excluding December) at 7:30 pm. The meeting place is at the Addison Airport Fire Station.

Current Best Fuel Prices (as of 1/10/16):

Gainesville (GLE)	\$2.99/gal
Mesquite (HQZ)	\$3.10/gal
Sherman (SWI)	\$3.20/gal
Denton (DTO)	\$3.34/gal
North Texas Regional (GYI)	\$2.99/gal

Treasury Report:

Total club membership through the end of Dec. is 111. Six members either resigned, went inactive, or passed away.

Average hours per month flown Oct-Dec:

4416W	3077U	87MT	314PW	4746L
28.2	35.3	28.7	24.5	42.3

As a non profit club we are maintaining our Net income very near zero after expenses. (The Club tries to maintain a small positive income for unexpected expenses.)

Upcoming Events & Fly-Ins:

Emergency: Getting It Right When Things Go Wrong

Wednesday January 20, 2016

7:00 - 9:00 p.m.

Addison Conf. & Theatre Centre

15650 Addison Road

Addison, TX 75001

The following classes are taught by Wayne Fink, a fellow RFC member:

Instrument Ground School - Tuesday nights beginning Jan. 26 at 6:30 pm for 16 weeks.

Comprehensive instrument rating course to assist students in passing the examination and certification as an instrument-rated pilot. If security alert levels permit, the class will have a field trip to Ft. Worth Center.

Private Pilot Ground – Tuesday nights beginning Feb. 2 at 7:00 p.m. for 16 weeks.

In this course you will obtain the necessary aeronautical knowledge and meet the prerequisites specified in Federal Aviation Regulations, for a private pilot written test.

Convective Weather for Pilots – Feb 20 and 27 9:30 a.m. to 3 p.m.

In addition to covering convective and severe weather, this course will give additional insight into the probability and likely severity of weather and how to avoid convective weather surprises. Also, learn many new weather sources.

You can register by calling Collin College at 972-985-3711, or online at www.collin.edu/CE.

Meet Our New Members

RFC has the following new members from November and December:

- Jason Evans
- Scott Ferris
- Jim Scofield
- Gregg Sayh

Here is a little background on a couple of our newest members.

If you are a new member and want to share a little about yourself in an upcoming newsletter, please contact charladumas@gmail.com.



Jim Scofield

From: Wichita Falls (been in Dallas since 1974)

Certificates & ratings:
Private, Instrument

Pilot background: Jim learned to fly in 1972 while at Austin College in Sherman, TX. He gave up flying as his career and family grew, but

he always missed it. About 4 years ago, he started again and achieved his instrument rating - best decision he has made in years. Flying also runs in Jim's family: his father was a B-29 pilot during WWII. When Jim started flying, his father was supportive until he learned Jim was practicing stalls. His dad had lost many good friends to stalls leading to spins during training. Jim had to convince his dad that airplane designs had come a long way.

Memorable flight: "I took my 90-year-old grandmother up. She had never been off the ground before and never went up again, so I was her lone pilot she trusted. Beautiful but short flight."

Outside of aviation: As a member of the Salesmanship Club of Dallas, Jim can get you tickets to or entertainment venues at the AT&T Byron Nelson Tournament, which is a great cause and volunteer effort. As Jim says, "If you entertain your clients at the AT&T Byron Nelson, 1,200 kids and families with nowhere else to turn get help." For more information: attbyronnelson.org

Jim is married to wife Paula (33 years), and has a daughter named Carolyn. Both his wife and daughter are successful realtors.



Gregg Sayh

From: New York (the Bronx), then Northern New Jersey for most of his teenage years

Certificates & ratings:
Private

Pilot background: Gregg's first flight lesson was out of Teterboro, NJ in 1987 when

he was a teenager. His father owned a Piper Archer during that time and had earned his private pilot's license. From his exposure to flying during those teenage years, Gregg knew he wanted to fly - it was just a matter of time (and money). In 2004, Gregg moved to Texas from San Francisco and joined the North Texas Flying Club in McKinney. He earned his PPL in 2005, after which he bought into a 1968 Cherokee 180D which he co-owned for the next several years. He sold his share of the Cherokee to get into complex, high-performance planes ... which brought him to RFC.

Fun flights: Gregg's wife is from Ponca City, OK, so the occasional \$100 burrito at Enriques in Ponca City is a regular flight plan for them.

Another fun flight has been to a very nice resort in Lajitas, TX, which has its own landing strip and is close to the Rio Grande. Before leaving the resort, the tradition is to meet with the City Mayor - which so happens to be a Beer Drinking goat.

Outside of aviation: Gregg has an Engineering degree from Northeastern University in Boston MA. He and his wife - Dama - like to golf, travel, and spend time with friends and family, which includes their four-legged dog-child.

What are RFC Pilots up to?

Trip to Texas Coast - Charla Dumas

For years my mom has talked about kayaking the Lighthouse Lakes Trails - a network of waterways in Aransas Pass that essentially form "water trails." While she has travelled extensively elsewhere, this little dream of hers was still waiting to be realized. So when she mentioned it back in September, I said, "Let's go. Set the date, I'll book the plane."



For me this was a wonderful opportunity to take a passenger on a trip. (Most of my "passenger" flights are taking friends for local flights or \$100 hamburgers.) Plus, I'd never flown with my mom, and I wanted her to feel incredibly safe and comfortable as my passenger. I booked the Arrow and flew to Nacogdoches (KOCH) to pick her up, then down to Rockport (KRKP). We had great weather and smooth flights down and back. And I enjoyed flying a final approach over the ocean for the first time.



New Certificates & Ratings

Brent Cheatham

Private Pilot
Instructor: Brandon Maso

Kris Lonborg

Commercial Pilot
Instructor: Kenneth Campbell

Todd Abbot

Commercial Pilot
Instructor: Surry Shaffer

Charla Dumas

Instrument Rating
Instructor: Surry Shaffer

Volunteering with Challenge Air

Four RFC pilots volunteered at the last Challenge Air event, which was held at Mesquite Airport in November. **Larry Robicheaux** flew the Cherokee, **Kyle Smith** and **Stuart Thompson** flew 4416W, and **Surry Shaffer** flew a non-club plane. There were over 100 kids who got to go up and experience taking the controls of an airplane.

Challenge Air has been making a difference in the lives of children with special needs since 1993. The kids get to experience a 20-30 minute flight during which - depending on their capabilities - they get to take the controls and learn a little about flying hands-on.

The next Challenge Air event in Texas is in Tyler on Saturday, May 21, 2016. For more information: challengeair.com

Shopping Aircraft Salvage



John Rousseau and Stuart Thompson at Aircraft Salvage's Semi-Annual 50% Off Sale on Saturday, December 12th.

ADS-B

This article is a recap of Tom Johnson's presentation at the last RFC monthly meeting.

ADS-B is a major component of NextGen - the FAA's next generation of air traffic modernization, which will fundamentally change our air traffic control system from a radar-based system to a satellite-based system using GPS technology. Starting Jan. 1, 2020, ADS-B "Out" will be required in aircraft operating in areas that currently require Mode-C. So, what is this new requirement all about, and how does it really impact us?

What is ADS-B?

ADS-B is a comprehensive system which will provide real-time information to be automatically broadcast among participating aircraft, and will minimize the dependency on ATC for traffic and other aeronautical information. The ADS-B system is comprised of aircraft transmitters, aircraft receivers (optional), GPS/WAAS, ground-based stations/radio towers, RADAR, and FTC/ATC.

Definition of ADS-B:

Automatic: Messages are sent out periodically (usually very frequent - every second or so) without having to be interrogated or requested by another source.

Dependent: Dependent on a position source onboard the aircraft (GPS/WAAS)

Surveillance: Provides "radar-like" surveillance services for ATC to provide aircraft position.

Broadcast: Will continually broadcast aircraft position and other data to other aircraft and ground stations.

What is the purpose of ADS-B?

- Air-to-air surveillance capability
- Surveillance in areas with no radar coverage
- Real-time traffic and aeronautical information in the cockpit
- Allows reduced separation
- Improves ability of airlines to manage traffic and fleets
- Improves ability of ATC to plan arrivals and departures far in advance, and to more accurately predict arrival and departure times
- Allows for tracking of airport ground vehicles
- Reduces taxpayer costs associated with air traffic infrastructure

How does it work?

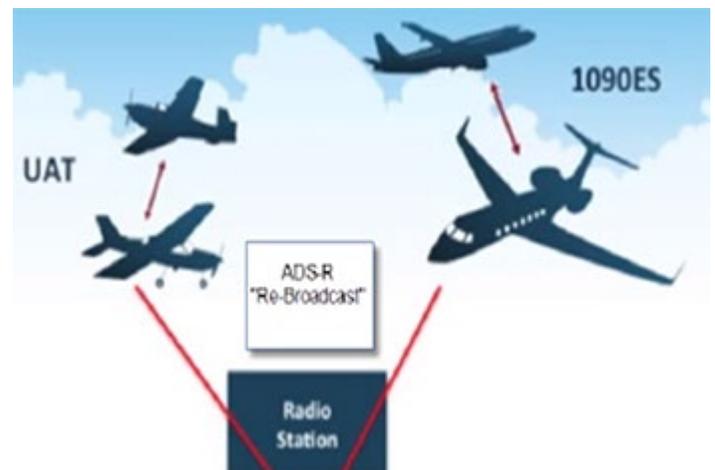
ADS-B is comprised of four broadcast services to provide traffic, weather, and other flight information directly to the cockpit. These services are: ADS-B, ADS-R, TIS-B, and FIS-B.

ADS-B (Broadcast):

- ADS-B "Out" means your aircraft can transmit information out (such as position and altitude), so that other ADS-B-equipped aircraft and ground stations can receive that information. **ADS-B "Out" will be required in all aircraft operating in areas that currently require Mode-C by Jan. 1, 2020.**
- ADS-B "In" means your aircraft can receive this information coming from other aircraft and from ground stations. **ADS-B "In" will be optional but is strongly encouraged.**

TIS-B (Traffic Information) & ADS-R (Re-broadcast):

- The FAA has approved two systems for ADS-B: 1) Universal Access Tranceiver ("UAT") which will operate on the **978 MHz**; and 2) a Mode-S transponder with an Extended Squitter ("ES"), which will operate on the current transponder-based **frequency 1090 MHz**.
- 978 (UAT) is dedicated solely to ADS-B and thus has plenty of room to accommodate all the future traffic once ADS-B is required. 1090, however, has very little room to grow as it is the current frequency used for Mode-C traffic.
- Traffic **at/above FL180** will be required to be broadcasting on 1090 - i.e. jets. Traffic **below FL180** can be on either 978 or 1090.
- **So how will the ADS-B traffic on 978 communicate with the traffic on 1090?** Ground stations: Both frequencies will transmit out to ground which will then re-broadcast that information to the other frequency.



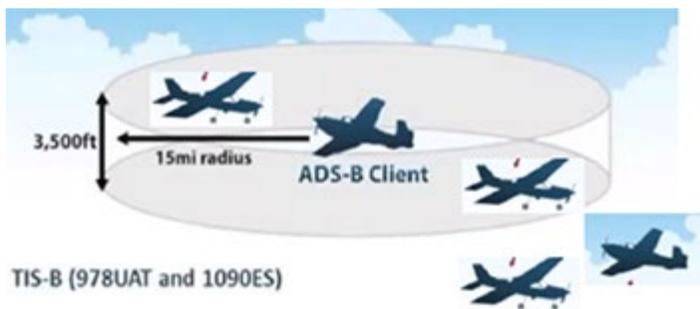
- 978 (UAT) aircraft send signals directly to each other
- 1090ES aircraft send signals directly to each other
- 978 (UAT) aircraft and 1090ES aircraft get information about each other from ground stations re-broadcasting the information they send out.

- Some aircraft may be **dual-equipped** to receive information directly from both 978 and 1090 frequencies - these aircraft will not receive traffic information from ADS-R (re-broadcast from the ground), as that would be redundant.
- **What about non-equipped aircraft (those not equipped with ADS-B at all)?** They will continue to use a Mode-C or Mode-S transponder and depend on radar. Plus, they will be depicted differently in traffic information displays.



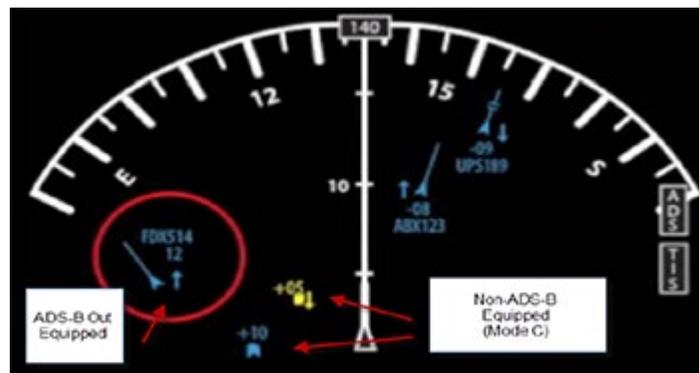
- Non-equipped aircraft will continue to use Mode-C or Mode-S and will display differently on traffic displays.

- **What traffic is displayed on my ADS-B “In” display?** Think “hockey puck:” Traffic on the same ADS-B frequency as you (i.e. 978) will display when +/-3500ft within a 15-mi radius of your aircraft. Traffic on the other frequency will display when +/- 5000ft within 15 mi via the ADS-R service (re-broadcast). TIS-B traffic advisory service will also display non-equipped traffic that is using a transponder.



- Aircraft in your “hockey puck” will show up on your traffic display

- **What information do I get about other traffic when using ADS-B “In?”** You will always get position information directly from other aircraft that are on the same ADS-B frequency as you. When an aircraft is in radar contact with ATC, you will get altitude, ground track, speed and distance data about that aircraft. For non-equipped aircraft using a transponder, you will be able to see them but will have limited information.



- Example of ADS-B “In” display

FIS-B (weather and other flight information):
FIS-B broadcasts weather and flight information **on 978 only**. This includes:

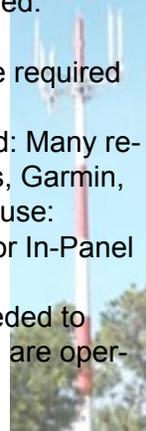
- METARs and TAFs (and SPECI and AMEND)
- AIRMET, SIGMETs, Convective SIGMETs
- PIREPS
- Temps/Winds Aloft
- Special Use Airspace status
- NOTAMs
- NEXRAD reflectivity



- How weather gets broadcast (FIS-B)

How do we prepare?

- **ADS-B “Out”** equipment and installation will be regulated by the FAA. Installation must be done by an approved avionics shop. Paperwork is required.
- GPS must be WAAS-enabled for ADS-B
- Mode-C / Mode-S **transponders** will still be required to support TCAS and backup systems.
- **ADS-B “In”** equipment will not be regulated: Many receiver options are available such as Stratus, Garmin, etc. Displays can include what you already use: Foreflight, Android tablets, Garmin GPS’s, or In-Panel displays.
- Hundreds of **towers / ground stations** needed to support ADS-B have already been built and are operating across the United States.



Cold Weather Flying



We've survived yet another Texas summer with its hot, bumpy, thermal-ridden flights. Now we are in our brief - but often icy - winter, and understanding how to approach cold-weather flying is important during this time. Cold-weather flying can be wonderful due to increased airplane performance, smooth air, and crystal-clear views. However, precautions need to be taken both on the ground and in the air to ensure a safe cold-weather flight.

Cold-Weather Ground Ops:

As with most things in aviation, doing the right things on the ground can prevent problems downstream. Here are some essential things you can do on the ground to prepare for a cold-weather flight.

Cover or Clear: If your aircraft isn't hangared, make sure the wings and cowling are covered. If you don't have covers for the wings, use a hand broom to brush off snow and ice. Cover the pitot tube and vents.

Preheat: Preheating is good idea even at cold temperatures above freezing, but it becomes especially important when temperatures are at or below freezing. The main reasons for preheating are to prevent metal-on-metal wear, and to improve lubrication. Starting a cold-soaked engine without proper preheating can cause as much piston wear as 500 hours of normal operation.

Best ways to preheat:

- Heated hangar
 - Best way to preheat
 - If travelling, request it from the FBO at least for the last night of your stay (most FBOs will rent overnight heated space)

- Built-in electric heater
 - Must be installed in airplane
 - Heats evenly, within a couple of hours
 - RFC planes with heaters: **87MT** and **46L**
- Forced-air cart
 - Often provided by FBOs, \$15-\$30 per preheat
 - Can heat the cabin as well
 - May not heat the engine as evenly as a heated hangar or electric heater

Monitor tire pressure and strut extension: Cold temperatures can cause pressure in both tires and struts to decrease.

Have a CO detector: The most common type of cabin heating system in general aviation aircraft is where outside air is heated by being passed through a shroud or covering on the exhaust system, then the heated air is vented to the cabin. **Note: All of the RFC planes are heated this way.** If there are any exhaust leaks in the system, then exhaust gases such as Carbon Monoxide may leak into the cabin. Be alert to the signs of CO poisoning: tightness across the forehead, headache, tingling fingertips, bluish fingernails, nausea, ringing in ears, and inability to concentrate. If you experience any of these signs, turn cabin heat off and open an outside air vent or the cabin air for fresh air.

CO detectors range from small simple devices which are good for about 30 days, to more reliable electronic devices.

Remove wheelpants if necessary: You may consider removing the airplane's wheelpants if applicable. Ice and slush can collect under the pants and cause the wheels to lock up when you land.

Charge the battery: As the temperature drops, a battery's performance and charge decreases, which increases the risk of cold damage and freezing. Freezing can destroy a battery. If a Club aircraft battery needs charging when you are away from KADS, check with the local FBO. Because of the importance of the battery and its decreased output in cold weather, the aircraft's electrical system should be checked to ensure optimum performance and recharging capacity.

Check for deterioration: Inspect hoses, hoseclamps, hydraulic fittings and seals for deterioration.

Have a good flight plan: Pay attention to freezing levels when looking at the weather. Have a backup plan ready if the weather changes during the flight. Get PIREPS before and during the flight if available.

Be prepared for an emergency: Dress warmly, bring snacks and water, have a backup radio and keep your phone charged.

Cold-Weather Flying Ops:

Don't rush warming up: Warm up the engine no higher than 1,000 to 1,200 rpm, unless it's necessary to reduce rpm to keep from exceeding the oil pressure redline. As the oil warms up, the rpm can be increased. Allow plenty of time for the engine to warm up. Don't consider taking off until the oil temperature has stabilized at least at the bottom of the green. Don't try to expedite the warming of the engine by closing the cowl flaps.

Watch oil temperatures: Really cold temperatures can cause oil to congeal in the oil cooler, which can cause the oil temperature to climb rapidly. Short of landing and waiting for the oil to warm up, slowing the airplane may reduce the amount of cooling air and permit the oil to flow again.

Watch engine temperatures: Higher-than-normal engine power settings may be needed to keep temperatures in the green arc.

Go easy on the brakes: Warm brakes may melt snow upon stopping, then the snow refreezes, potentially locking the plane in position. Use brakes as minimally as possible if landing and taxiing in snow and slush.

Adjust your crosswind component: A good rule of thumb is cut your max crosswind component by 50% for a snowy runway, and cut it by 75% for ice landings. This will help prevent weathervaning into the wind.

Beware of icing conditions: See below

Icing:

On the ground: Look out for ice when taxiing. Check the brakes before you do your run-up to be sure you can keep the aircraft from moving. Additionally, use proper aileron control when taxiing to prevent weathervaning into the wind.

In the air: At the FIRST sign of icing in air, descend (or if under an inversion layer, ascend) to an altitude with an above-freezing air temperature. If a descent puts you into IMC where you will probably accumulate more ice, you might consider climbing to an altitude where there is no visible moisture, then fly toward an area where you can descend without picking up more ice. If you are unsure

of your ability to properly handle the situation, contact ATC immediately. They can provide you with vectors and altitudes.

Landing with structural ice on the aircraft:

- Turn off the autopilot.
- Avoid abrupt control movements.
- Fly the approach at a higher-than-normal airspeed.
- Do not extend flaps
- Be prepared for a stall or sudden loss of lift
- Be prepared for a tailplane stall

Note: Tailplane stalls become a risk if ice accumulates on the horizontal stabilizer / stabilator. This type of stall is most often preceded by pitch oscillations or a sudden lowering of the nose. That's because horizontal stabilizers / stabilators generate negative lift, which acts opposite to the wings' lift. The recovery procedure is opposite that of a conventional stall: pull aft on the control yoke and reduce power. Raising the nose lowers the tailplane angle of attack, and breaks the stall.

Induction Icing: Induction icing is the **number one cause of icing-related accidents**. In icing conditions, fuel-injected engines are susceptible to blockages of the air filter and air intake passages due to ice. This can result in a loss of power and even engine failure. At the first sign of power loss, activate the alternate induction air door or doors. When these doors open, intake air routes through them, bypassing the ice-blocked normal induction air pathway. Many alternate induction air systems activate automatically by spring-loaded doors that are drawn in by the suction of the ice-blocked air intake. Some older fuel-injected airplanes have alternate air doors that must be manually opened using knobs or levers. Check the POH to see how the alternate induction air system works in your airplane.

Note: Alternate air sources use unfiltered air. They should be closed on the ground, unless conditions are conducive to engine icing while taxiing.

Landing on an icy runway: You may not have encountered ice in the air, but there may be ice on the ground from precipitation that has not yet melted. Here are some tips for landing on ice:

- Use flaps if the aircraft is free of structural icing
- Cut your max crosswind component by 75%
- Touch down as slowly and gently as possible
- Keep braking to an absolute minimum
- When you must brake, brake as gently as possible

Club Information

RFC Board of Directors & Officers

- President – John Rousseau*
- Vice President of Membership – Surry Shaffer*
- Treasurer – Jim Leverett*
- Secretary – Kris Lonborg*
- Operations Officer (except oil) – Larry Robicheaux*
- Operations Officer (oil only) – Stuart Thompson
- Safety and Training Officer – Tom Johnson*
- Maintenance Officer – Bruce Hanson*
- Flight Instructor Coordinator – Tom Johnson*
- Program Director – Surry Shaffer*
- Newsletter Editor – Charla Dumas
- Webmaster – Ed Wagner

*Member of Club Board of Directors

RFC Club Checkout Instructors

- Richard Aron
- Kenneth Campbell
- Mike Howle
- Chris Hubbard
- Tom Johnson
- Brandon Maso
- Bob Schneider
- Surry Shaffer
- Stuart Thompson

Bios and contact information for instructors are available at rfcdallas.com

Current Aircraft Rental Rates (Wet)

4746L (Cherokee)	\$100/hr
314PW (Arrow)	\$144/hr
4416W (Bonanza)	\$161/hr
87MT (Bonanza).....	\$164/hr
3077U (Bonanza)	\$172/hr

Current Aircraft Rental Rates

Membership Deposit	\$500
Initiation Fee	\$65
Monthly Dues:	
Cherokee only	\$45
Cherokee/Arrow	\$55
Bonanza/Cherokee/Arrow	\$65

For more information, visit rfcdallas.com

Hours & Oil Report:

Please remember to log added oil in the time sheets. The math below depends on our self-reporting.

RFC DALLAS INC. - HOURS & OIL USE 2015												
	4416W		3077U		87MT		314PW		4746L		HRS MONTHLY TOTAL	
	HRS	OIL	HRS	OIL	HRS	OIL	HRS	OIL	HRS	OIL		
JAN	34.2	7	25.1	4	16.5	2	17	1	25.2	1	118	
FEB	18.2	3.5	8	0	26.6	5	32.7	5	0	0	85.5	
MAR	14.3	2	25.7	0	33.7	4	29.6	2	0	0	103.3	
APR	0	0	24.1	0	43.2	4	34.3	5	0	0	101.6	
MAY	0	0	38	2	50.2	8.5	51.3	6	7.4	0	146.9	
JUN	37.6	9	43.5	3	33.5	6	32.2	3	29.7	3	176.5	
JUL	48.9	14	42.7	2	15.2	7	50.5	7	28.5	1	185.8	
AUG	38.7	10	31.7	0	35.6	10	49.4	8	36.3	4	191.7	
SEP	40.6	10	13.9	0	36	2	57.3	7	25.3	1	173.1	
OCT	31.4	8	29.1	0	29.9	3	38.8	7	35.3	2	164.5	
NOV	17.4	3	35.5	1	18	2	13.1	1	30.3	3	114.3	
DEC	35.8	9	41.3	1	38.2	6	21.6	3	61.4	5	198.3	
TOTALS	317.1	75.5	358.6	13	376.6	59.5	427.8	55	279.4	20		
HRS PER QT		4.20		27.58		6.33		7.78		13.97		
QTS PER HR		0.24		0.04		0.16		0.13		0.07		
											HRS YEARLY TOTAL	
											1,759.5	