



Shop Manual

www.badgoat.net/ptcaths

January 2016

President's Message

John Ellingwood

Happy New Year everyone! Welcome to 2016 and another great issue of the PTC Shop Manual. It's hard to believe that, as we send this out, a vehicle manufactured in 1990 can now be registered as an antique auto in Maine. In a few more years hobbyists will be considering a diagnostics computer in their shop! Ok, maybe not, but if I remember right it was around 1993 that electronic engines started to become the standard. I believe Detroit might have had a jump on that but I may be wrong. I was more interested in driving them than anything else at that time.

How times have changed. I'm just talking about the last few decades, but I digress. One thing that won't change is the Pine Tree Chapter commitment to our members. The chapter has always managed to bring you news that interests you from today's topics to historical tidbits and stories from the archives. Letting you know about events in our area, and beyond, as they happen and hosting a few of these events ourselves. I am positive 2016 will be no different.

There will however be a slight change in officers this year. Due to life circumstances and changing priorities, I will no longer be able to serve as President of the Pine Tree Chapter. I have debated this difficult decision over the last year and feel it is something I need to

do. It is not only best for myself but the best move for the chapter. I want to thank everyone in the group for their support and enthusiasm over the last few years that I have served as President. We have a lot of talent in our group. I am confident that together we can recruit one or more new candidates for the position. If you know someone that you would like to see run for President or any other officer or director position, please let one of your directors know. We are coming into the season for planning the upcoming year. Our Director's meeting will be held at Jamie Mason's in Falmouth on January 24th. Our annual membership meeting will be held on March 20th at the Owls Head Transportation Museum.

Don't forget to check out the January / February edition of Wheels of Time for a familiar face from Down East Maine. While you're perusing that you can start planning your trip to Salem, Oregon for the 2016 ATHS National Convention if you have not done so already. The official show dates are May 26-28. I'm thinking that will be another great one.

In our next newsletter we'll give you a brief run-down of the directors meeting and news on the upcoming Membership meeting in March.

Take Care,

John

Update from Rusty Fender Estates

Jamie Mason

I asked Diane if it would be okay to put a message out to the club that Don's starting to show his age and is staying close to home these days. Diane thinks he's got a leaking rear main seal and his babbitted bearings might be going. Luckily, Diane has been keeping him at bay and has been putting a little Marvel's Mystery Oil in his coffee to keep him from squeaking! Feel free to drop them a line if you have time.

Not to be outdone, Diane was out in the big garage a couple weeks ago putting away the Harley Davidson golf cart for the winter. The battery had been charged, so Diane went to start it. Normally the H-D sputters to life

but not that day. It started quicker than Diane has ever seen, was stuck in reverse, and abruptly took Diane on an unexpected ride. Once the dust settled, she climbed out from the back of the golf cart, underneath the canopy, which had fallen on her and called it a day. She made light of the situation but it sounds like it was not a joy ride by any means. That being said, the cart is parked for the winter.

In light of all the adventures at the Rusty Fender Estates in lovely downtown Dresden. Diane wishes not to run for reelection as secretary of the Pine Tree Chapter. She's had a good run and still wants to be active in the club but has her hands are full at home these days. She and Don love the Pine Tree Chapter and its members and look forward to our future gatherings.

Pine Tree Chapter Annual Meeting Sunday March 20, 2016

at Owls Head Transportation Museum. More Info next month

Owls Head Truck and Tractor Show Saturday and Sunday July 23 & 24, 2016

Further Information in next month's Newsletter

Dealing with Diesels

George Barrett

We've had some great relatively warm weather this fall and winter, how long it will last is anybody's guess but there's nothing wrong with enjoying it while it lasts. I have many memories of cold weather and machinery, particularly after I bought my first car and figured out that if I wanted use it in the winter I'd better learn how to take care of it and figure out the little things I could do to help it start as well as the things not to do that would surely run down the battery or flood it meaning I might be late or walking. I remember one morning at about 40 degrees below zero I put new points in and then it started. Maybe it was because the temperature increased about 20 degrees by the time I finished the job. With the cars, and I had standard shifts, we were always giving each other a push to get the engine started. I remember in on place I used to park heading down a hill. The one time I had to roll the car down it to get it started I had to figure out what gear to put in, usually I used second but I thought third might give me better traction on the snow. I was thinking what I'd do at the bottom of the hill if the car didn't start, I didn't have an answer but it started so I didn't need to worry about what I'd do next.

My first experience with diesels was in the early 1960s. Although not my problem if there was a piece of machinery within my space I had to investigate. In this case I was back on Christmas vacation and the recreation area where I worked during the summer was having some earthwork done before the ground really froze and I was there doing some brush cutting.

It was a cold still morning, the Cat D-4 was sitting there thoroughly cold soaked at about 30 below when we first showed up. The contractor's two guys were questioning each other about if they should even consider trying to start it but they'd been sent to do a job and back then you did what you were told.

They wrapped the rope around the starting pulley of the pony engine, it took more than one try but they finally got the choke adjustment set right and it came to life, sounded pretty good. They let it warm up and then went for the clutch to engage it to turn the tractor's engine. That was a real load for the little starting engine, you didn't want to just throw that clutch like you did during the summer. Without exaggeration that engine turned for a good twenty minutes and then the pony quit, out of gas. I found some gas for them, filled the tank and resumed cranking for another ten minutes before the diesel started firing.

With direct drive equipment and trucks you could push or pull to start (leave your blade or bucket up), not so for the front end loaders. The power shift transmission and torque converter power train of the loaders made it impossible to push start them so as a matter of habit we used either. All the service trucks had a few cans, as a salesman I always had some with me. Many times I needed to evaluate a used machine and the only real way was to start it, listen to it and then run it. I found I could most most often get a Detroit Diesel going if the temperature was above 10 below zero, assuming the battery and starter was good. Most likely it would need either so I didn't even think

about not using it. A few machinery owners and mechanics didn't like it but if used correctly there was no problem. There was very little energy in either, when it fires there wasn't much of a load on the pistons. Many machines of the 50s and 60s had cold start systems where you'd put in a canister of "starting fluid" but these usually rattled themselves apart or rusted during the normal summer working months and by winter no one even remembered they had one. You didn't need much, if I was alone I'd spray some down the air breather and by the time I got in the cab and cranked the engine that was all it needed.

The early Michigans of the 1950s had Continental Diesels and other machines had Hercules. You knew they weren't going to start. Usually a Cummins would go if the temp was above ten degrees but much depended on the condition of the engine. If the air cleaner and the electrical components were maintained and the machine had been run recently you had a pretty good chance of getting it going. Much of my experiences were in some gravel pit where the loader hadn't run for a few months I really didn't expect it to start.

Speaking of push starting machines with torque converters and power shift transmissions the only one I knew of where that would work was a military rubber tired tractor/dozer, the Clark 290M. This was similar to the Cat 830M and was primarily designed for scraper work, two could work together, each one helping the other load and assist each other on the fill if necessary.

All the Clark power trains had three externally mounted pumps that were driven at engine speed: a steering pump, a main hydraulic pump for the attachment (loader bucket or dozer blade) and what we called a converter charging pump. This supplied the hydraulic pressure to activate the various clutches on the transmission to get forward, reverse, and the four to eight forward speeds. The 290M had a fourth pump driven by the drive shafts so when the wheels turned there would be hydraulic pressure to activate the transmission clutch packs and the tractor could be push started. I don't know if Caterpillar had a similar system for the 830M, probably not because they used the D342 engine with a gasoline pony starting motor, same as the D-8 1963 era machine.

Most of the new machines started fairly well. I remember once when we were demonstrating, in fact we'd almost sealed the deal with Blue Rock for a Michigan 275 6.5 yard loader to work the pit in West Cumberland to load all the sand for I-295 around Back Cove after the sand drains had been installed. It wasn't my deal but I remember the salesman saying he went up there in the middle of the night to start the machine so it wouldn't get completely cold soaked. My experience with those 855 high horsepower Cummins engines was they were very reliable, but better safe than sorry.

One interesting problem I had was after I became the product support manager and it had to do with a Komatsu dozer. We sold a big D-155 (D-8 size) to a logger in Oxford County. We had never sold anything to him before and he looked at all the dozers in that category and even though he fought the Japs thirty five years before he told the salesman something to the

effect that they could make a machine as nice as that for the price they were willing to sell it he'd like to have one. He had seen his younger days and wanted the best cab he could get and that's what he got, pressurized, climate controlled.

As soon as the weather got cold I got word he was having starting problems. At the Komatsu service meetings I'd been to, and to their credit they'd had many of them, I kept hearing the guys down in the coal fields were having a problem with the 155 starting in the morning. I hadn't paid much attention because we hadn't sold any and I figured by the time we did they would have the problem solved. Komatsu was very diligent with regard to follow up and figuring things out so I gave them a call (no email back then). Unlike the American manufacturers Komatsu would not lie to you, they would admit there was a problem and that they were working on it. They told me once that Chadwick-BaRoss was their chosen representative in the State of Maine and we were to take care of any problems the best way we could. This being a service issue that I was to investigate, do anything I thought appropriate, keep them informed and keep track of any costs because it would be covered under warranty.

It was decided that on the next cold morning the general manager, salesman, and I would make a trip to look at the tractor as it started. We arrived on site about 9:00, I remember the temperature being about 10°, a sunny calm pleasant day to be out. We met the owner at the landing, he said the D-155 was about a mile away up the hill. He had his D-7 running and asked us to stand on the drawbar and hang on, that would be our ride up the snow covered twitching road.

The owner tells me that probably the engine will crank easily and then start running very slowly and rough and within three or four minutes it will smooth out, the exhaust will clean up and gradually it will run normally. Everything happened as the owner said. It seemed to me to be running on two out of the six cylinders but I put six wax marks on the manifold so I'd be sure of which ones. At some point the comment was made that it looked like we were making smoke signals, little rings floating straight up in the calm morning air. The owner asks me that now the engine has smoothed if would I follow him back down the trail with the GM and salesman with me in the cab. There was plenty of room in the cab as I tried not to be too clumsy with the controls. I had only run a crawler this size maybe three times and I think only to move it, I know it couldn't have been more than two hundred feet.

The GM and salesman are talking away, I'm trying to figure out what gear I should be in and where to set the throttle. Should I put the throttle full ahead and use the the decelerator? How fast would the owner be running the D-7? I was fooling with the throttle and tell my riders I just wanted to see if the engine was smooth as it was accelerating. After a half a mile I was feeling better about things, kept an eye on the gauges and noticed the temperature was still on the left pin. Being new it was a beautiful handling tractor, in fact that's one of the strongest selling points, operators love them. It was comfortable and one thing kept going through my mind; Caterpillar was just coming out

with their "high drive", would other manufacturers copy them?

Now we're getting down to the landing, I'm following the owner, he makes a smooth right turn, I attempt the same but I'm not turning right, I'm sliding down a slight incline to my left. I check to see where that's going to take me, not good, just brush before what I think is a much steeper downward slope. GM and salesman still talking, have no idea where we are or what's going on. I had decided to use the decelerator because it was new and different and figured I had one chance to make a good appearance so I pushed hard on the right pedal and let my foot off the decelerator. Success! All 1173 cubic inches pitched in, the engine came up to 2000 rpm, all 39 tons took a smart turn to the right like a sports car and I came to a stop right next to the D-7. I tried not to let my legs shake as I climbed out. I told the GM I was just checking the engine's response, he's happy, asks what I'm going to tell the owner, I say I don't know yet.

We all talk for a few minutes, owner thanks us for coming up to see him, I ask him about the temp gauge, he says it hardly ever gets off the pin. Says the owner's manual tells operators to let engine idle and cool off before shutdown. I tell owner I think there's a problem with the thermostat, will be in touch with him.

I am convinced that the thermostats are not letting the engine warm up and thus there is residue in there that prevents the valves from closing tightly after they have been open all night. No matter what position the crank is in there will always be some valves open and if they can't close tightly there will not be enough compression and the fuel will be unable to burn.

At this point we think the thermostats (there are two) are a Cummins product because Komatsu uses Cummins in some of their equipment and I knew had a long time relation with them. I call the Komatsu service manager. All the people we were dealing with there were Americans, the only time we saw any Japanese were at the big service meetings. Komatsu service manager does not agree with my conclusion but says try anything you want.

I had a very good relationships with both the Detroit Diesel and Cummins. The Cummins service manager and I had lunch together regularly and he took a great interest in our business so I give him a call. I ask him if I can adjust anything, he says no. Asks what the part looks like, I say cylindrical with a small notch. He says that's the vented type, you want the none vented type. I say what difference will that vent make, it's not very big. He says it makes all the difference in the world and I believe him.

End of story is that we put in two non vented thermostats. I made the trip up to the machine just before our service man completed everything and so I was there when he started it up. The temperature gauge comes up to warm, cab heater blows warm air. I think we fixed it and have never heard to the contrary. There are a lot of cold mornings I'm out with the dog and I'm thinking "I wonder how such-in-such machine turned out after we fooled with it"

International Paystar Series 40 Plus Years and Counting

Clayton Hoak

In 1972 International introduced the Paystar 5000. The Paystar was a heavy-duty, on-off highway series of diesel powered trucks designed and built specifically for the construction industry and was available with a wide choice of mid-range and large-bore diesel engines with ratings from 200 hp to 370 hp. Gasoline powered Paystars were not available. Typical applications were concrete mixers, road tractors and dump trucks. The Paystar Series replaced International's M Series, and the 210-230/ F210-F230 Series trucks.

The Paystar was initially offered in 6x6, 6x4 and 4x4 configurations with setback front axles, steel cabs with aluminum doors, and aluminum pit fenders. The model designation for the mid-range diesel engines was the Paystar 5050. The base engine was International DV-550 diesel rated at 200 hp. Optional diesel engines for the 5050 were the Detroit 6V-53 (210 hp) and the Caterpillar 1160 (225 hp). Transmission options included numerous 5 speeds for all models, and Roadranger, Allison and 3 or 4 speed auxiliaries for the 6x4 model.

The model designation for large-bore diesel engines was the Paystar 5070. The base engine was Detroit 6-71N rated at 238 hp. Optional diesel engines for the 5070 were five Detroit (three normally aspirated 8V-71Ns and two turbo-powered 8V-71Ts with horsepower ratings from 250-350 hp); and twelve Cummins diesels (NH-230, NHC-250, Super 250 and 270, NTC-255/270/290/335/350, NTA-370, V-903 and VT-903 71Ts with horsepower ratings from 230-350 hp). By 1974 the engine options changed to one International diesel (V-800 - 280 hp), three Detroit diesels and seven Cummins diesels. Basic chassis weight for the F-5070 6x4 was 14,750 to 14,920 depending on the wheelbase. The F-5070 6x4 had a maximum GVWR of 73,160 pounds and a maximum GCW of 120,000 pounds.

In 1973 International introduced the 5050 SF and 5070 SF Series Paystars which were 4x4 and 6x4 models with set forward front axles and a fiberglass tilt hood and fenders. Aluminum cabs, bumpers, fuel tanks, walking beam suspensions, and rear hubs could be ordered to save weight.

Between 1973 and 1978 the US Army purchased 700 Paystar F5070 dump trucks as part of a program to purchase commercial construction equipment instead of more expensive military tactical vehicles. The 20 ton 6x4 Internationals featured Cummins NTC 290 diesels, Allison 5 speed powershift transmissions, three speed auxiliaries, 184 inch wheelbases and Thiele 12.3 CY heated dump bodies (Crismon, U.S. Military Wheeled

Vehicles, Victory WW2 Publishing, Ltd).

In 1976 International introduced the Lightweight Western Paystar designed "specifically to conform to West Coast bridge formulas". "Through the use of lightweight components, combined with strategic engineering features, (International) trimmed it of over 1000 pounds". The weight savings were in the 16 inch drop center frame, tilting fiberglass fenders and hood, and available aluminum components (all previously offered). In addition to the International V-800, Detroit and Cummins engines the Lightweight Western Paystar was also available with International's DT-466 and "big bore" gasoline power. The Lightweight Western Paystar replaced the 8500 M mixer chassis that was almost simultaneously introduced with the Paystar series in 1972.

In 1980 the Lightweight Western Paystar was re-worked and re-designated as the Paystar F-5000 WWM (Weight Watcher Mixer) featuring an all aluminum cab, 18,000 pound front and 38,000 pound rear axles, a Detroit 6V-92TTA engine (290 hp) and a chassis curb weight of 13,875 pounds. Optional engines were Caterpillar 3306 PCT and 3306 PCTA, or International DT-466 and DTI-466. No Cummins engines were offered with the Paystar F-5000 WWM.

In 1987 the model designations 5050 4x2; 5050 4x4; 5050 6x4; 5050 6x6; 5050 6x4 SF; 5070 4x2 and F-5070 8x6 were replaced with a simplified model designation of 5070 (4x4), 5070 (6x4) and 5070 (6x6) encompassing the GVWR ranges of the discontinued models. Only one mixer chassis, the F-5070-SFA was offered (Crismon, International Trucks, Motorbooks International).

The Paystar continued basically unchanged for many years, updating components as upgrades became available and/ or regulations required. A couple of notable changes are the standard steel cab with aluminum doors was replaced by a standard all aluminum cab between 1981 and 1986; and the Paystar designation was dropped in the early Navistar years, referenced as 5000 Series, however the designation reappeared, as PayStar, sometime between 2002 and 2007.

Fast forward to 2015-16 the International PayStar is still produced for the heavy haul and severe duty markets. The truck is available in tandem (6x4) and tri-drive (8x6) versions with GVWs to 80,000 pounds and wheelbases to 262 inches. The PayStar is offered with either Navistar N13 (365 to 475 hp) or Cummins ISX 15 (500 to 600hp) engines; Eaton manual, Eaton Ultrashift Plus, or Allison automatic transmissions; and Meritor or Dana-Spicer drive axles; and is available with a conventional or sleeper cabs. Single axle (4x2) and all wheel drive (4x4, 6x6) models are not listed; and pit fenders do not appear to be available.



1972 Brochure Cover Paystar 5000

International	DV-550B	200 HP	Std.	Std.	Std.		
Detroit Diesel	6V-53 (N-50)	210 HP	Opt.	Opt.	Opt.		
Caterpillar	1160	225 HP	Opt.	Opt.	Opt.		
Cummins	V-555	225 HP	Opt.	Opt.	Opt.		
Detroit Diesel	6-71N (N-65)	238 HP					Std.
Detroit Diesel	6-71N (N-60)	218 HP					Opt.
Detroit Diesel	8V-71NE (N-55)	260 HP				Opt.	Opt.
Detroit Diesel	8V-71N (N-60)	290 HP				Opt.	Opt.
Detroit Diesel	8V-71N (N-65)	318 HP				Opt.	Opt.
Detroit Diesel	8V-71T (N-70)	335 HP					Opt.
Detroit Diesel	8V-71T (N-75)	350 HP					Opt.
Cummins	NH-230	230 HP				Std.	Opt.
Cummins	Super 250	250 HP				Opt.	Opt.
Cummins	NHC-250	250 HP				Opt.	Opt.
Cummins	Super 250/270	270 HP				Opt.	Opt.
Cummins	Power Torque 270	270 HP					Opt.
Cummins	NTC-290	290 HP				Opt.	Opt.
Cummins	V-903	320 HP					Opt.
Cummins	VT-903	320 HP					Opt.
Cummins	NTC-335	335 HP				Opt.	Opt.
Cummins	NTC-350	350 HP					Opt.
Cummins	NTA-370	370 HP					Opt.

1972 Paystar Engines Available

1972 Paystar Specifications

	5050 (4x4)	5070 (4x4)	F-5050 (6x6)	F-5050 (6x4)	F-5070 (6x4)
GVWR Std., Lbs.	36,920	36,920	49,200	44,860	48,860
GVWR Opt., Lbs.	—	—	50,000	46,000	53,200
GVWR Opt., Lbs.	—	—	—	50,000	62,000
Maximum GVWR, Opt.	41,000	41,000	56,000	56,460	68,000
GCW Maximum Lbs.	—	—	—	65,000	120,000
BBC	114"	114"	114"	114"	114"
Front Axle, Std.	FA-138, 16,000 lbs. driving front axle			FA-139, 12,000 lbs.	
Opt.	FA-184, 18,000 lbs. driving front axle			FA-136, 16,000 lbs.	
Opt.	FA-186, 20,000 lbs. driving front axle			FA-182, 18,000 lbs.; FA-183, 20,000 lbs.	
Front Suspension, Std.	4" x 54" Springs with threaded pins and bushings				
Opt.	—	—	—	4" x 54" Tapered leaf springs; front shock absorbers, aux. front springs	
Rear Axle, Std.	RA-57, 23,000 lb.		RA-351, 34,000 lb. tandem drive, full floating axles, differential power divider		RA-355, 38,000 tandem drive, full floating axles, differential power divider
Opt.	—	—	Choice of rear axles from 34,000 to 38,000 lbs.		Choice of rear axles from 38,000 to 65,000 lbs. in both single and double reduction
Rear Suspension, Std.	3" x 56" leaf springs with auxiliary 23,610 lb. capacity		34,000 lb. capacity steel springs Hendrickson RT-340		38,000 lb. capacity steel springs Hendrickson RT-380
Opt.	—	—	Choice of 34,000 or 38,000 lbs., 52" walking beams; rubber load cushion		Choice from 38,000 to 50,000 lbs., 52" and 56" walking beams; rubber load cushion
Transmission, Std.	T-403, 5 speed constant mesh, direct in 5th	T-135, 5 speed constant mesh, direct in 5th	T-403, 5 speed constant mesh, direct in 5th		T-135, 5 speed constant mesh direct in 5th
Transmission, Opt.	Choice of 5-speed 13-speed and automatic	5-speed	Choice of 5-speed 13-speed and automatic		Choice of 5, 6, 7, 13, and 16-speed transmissions
Aux. Trans., Opt.	—	—	—	Choice of 3 and 4-speed	
Transfer Case, Std.	TC-163 Transfer case				
Wheelbase, inches	146" to 182" (Others available)		164" to 212" (Others available)		
Brakes, Service; Std.	IH air with EW 12 cu. ft., water cooled compressor				
Front	17¼" x 4" Wedge Type			15" x 3½" Wedge Type	
Rear	15" x 7" Wedge Type			15" x 7" Wedge Type	
Total lining area	1,570.50 sq. in.			1144.3 sq. in.	
Electric System, Std.	12 volt, 65 amp. alternator 27SI type				
	2-6V-150 amp. hr. batt.	4-6V 150 amp. hr. batt.	2-6V 150 amp. batteries		2-6V 208 amp. hr. batt.
Frame, Std.	12¼" x 3¾" x ¾" heat treated, bolted construction, 110,000 PSI steel channel; Heavy duty steel channel bumper			12" x 3¼" x ¼" heat treated, bolted construction, 110,000 PSI steel channel; Heavy duty steel bumper	
Opt.	—	—	—	12¼" x 3¾" x ¾" heat treated, bolted construction, 110,000 PSI steel channel	
Opt.	12-9/16" x 3½" x ¼" steel outer wrap "U" channel reinforcement				
Opt.	—	—	—	12-15/16" x 3-11/16" x 5/16" steel outer wrap "U" channel reinforcement	
Fuel tanks, Std.	50 gal. steel safety tank with center step, right side mounted				
Opt.	50 gal. alum. safety tank(s) single or dual, right side mounted				
Opt.	50 gal. steel safety tanks, dual, right side mounted				
Steering, Std.	Sheppard M292 belt driven power steering	Sheppard M292 gear driven power steering	Sheppard M292 belt driven power steering	Sheppard M492 belt driven power steering	
Clutch, Std.	13" 2-plate	14" 2-plate	13" 2-plate		14" 2-plate
Wheels and Tires, Std.	Single front and dual rear; 15-22.5, 14 ply tubeless front tires; 11.00 x 20, 14 ply rear tires and tubes; disc wheels (front), cast wheels (rear)		Single front and dual rear; 15-22.5, 14 ply tubeless front tires; 10.00 x 20, 12 ply rear tires and tubes; disc wheels (front), cast wheels (rear)	Single front and dual rear; 10.00 x 20, 12 ply tires and tubes; cast wheels (front and rear)	



2007 Paystar

Pine Tree Chapter Director's Meeting

The anticipated schedule for the day of the director's meeting on January 24th is as follows: People may show up any time after 10 for truck talk, snacks, barn tours and general banter from the kitchen. A hot lunch should be ready at 11:30. We will provide lunch but if you would like to bring something, feel free to bring snacks, drinks, or deserts. The meeting will

start at 12:30. If you could RSVP, even if last minute, that would be great. Phone, text, or email are all acceptable. If you have special food requirements or any other special need, please let us know. Jamie & Sheena 207-949-1360 or haroldjmason@gmail.com

From the Editor *George Barrett*

This is a busy time to put a newsletter together but we thought important to communicate to all the members the information on the first page. Please consider how you might be able to help the Chapter as an officer or director.

Next month's issue will have more information of all sorts. The discussion at the director's meeting will be aimed at trying to plan activities that we think the membership has an interest in, how we can improve what we're doing and who we can tap for leadership positions.

We had a Legislative Committee meeting in early

December at Jon Doyle's office in Augusta. This will be followed soon at which time we should know more about what is proposed for the upcoming session that will impact Chapter members.

Lastly, I enjoy hearing from members from time time when there's a question or comment about the Shop Manual. Never hesitate to call or email, I've never had a dull phone call from a Chapter member. I want to know your likes and dislikes, I need ideas and although we've had an increase in contributions we can always us more.

2013 Paystar Options

GVW

- ▶ 52,350 – 80,000 lbs.

BBC/BA

- ▶ 121" BBC/ 47.1" BA
- ▶ 124" BBC/ 47.1" BA

Cab Configurations

- ▶ Conventional, Sleeper

Wheelbase Options

- ▶ 208" – 372"

Axle Configurations

- ▶ 6x4, 8x6

Rear Axle

TANDEM REAR AXLE (6x4)

- ▶ Meritor: 40,000 – 58,000 lbs.
- ▶ Dana Solcer: 40,000 – 58,000 lbs.

TRIDEM REAR AXLE (8x6)

- ▶ Meritor: 53,000 – 53,000 lbs.

Front Axle

- ▶ Meritor: 12,000 – 22,000 lbs.

Frames

- ▶ Heat Treated Alloy Steel 110,000 – 120,000 PSI
- ▶ 10.25"–12.25" Steel Frame Rails
- ▶ Single or Full Outer "C" Channel Reinforcement

Front Suspension

- ▶ Spring Parabolic Taper Leaf: 12,000 – 22,000 lbs.
- ▶ Multileaf Slipper: 20,000 – 21,000 lbs.

Rear Suspension

TANDEM

- ▶ Hendrickson: 40,000 – 65,000 lbs.
- ▶ Chalmers: 40,000 – 50,000 lbs.

AIR TANDEM

- ▶ Neway: 46,000 – 52,000 lbs.
- ▶ Hendrickson: 40,000 – 46,000 lbs.

AIR TRIDEM

- ▶ Neway: 69,000 – 78,000 lbs.

Electrical System

ALTERNATORS

- ▶ 12 Volt 180 – 320 Amp.

BATTERY SYSTEMS

- ▶ International: 12 Volt 1900 – 2775 CCA

Exhaust System

- ▶ Horizontal switchback right side under cab with horizontal tailpipe of dual vertical tailpipe.

Brakes

- ▶ Air Drum Brakes with ABS

Steering

- ▶ Sheppard Single Power or Dual Power
- ▶ Dual Power Standard on Front Axle 14,600 lbs. and Above

Engines

- ▶ MaxxForce® 13L SCR: 410 – 475 hp and 1,450 – 1,700 lb.-ft. of torque
- ▶ Cummins ISX15: 435 – 600 hp and 1,450 – 2,050 lb.-ft. of torque

Transmissions

- ▶ Eaton: 10, 11, 13, 15, 18 Speed Manual
- ▶ Allison: 4000, 4500, 4700 Series (RDS, OFS) Automatic
- ▶ Eaton: UltraShift (VCS, VMS, VXP) 10, 11, 13, 15, 18 Speed

Fuel Tank

- ▶ 60 – 120 Gallon, Single or Dual, Non-Polished or Polished Aluminum. Mounted Right and/or Left Side Under Cab

Tires

- ▶ Continental, Michelin, Goodyear, Bridgestone

Classified Ads

Wanted: Spicer auxiliary transmissions- 8031 or 8341 but interested in whatever you might have laying around. Contact Evan Grass in Mars Hill at (207) 227-3568

For Sale: 1977 International Transtar II 4070B single axle (4.44 ratio), Cummins NTC 300 Magnum, Roadranger RTO 9513, sleeper cab with rare rear window option, equipped with "Link Cab Mate" cab air ride, recently repainted in bright red with white stripes, sharp looking nice driving truck. \$15,000 contact Bill Mullin (207) 799-0846.

For Sale: 1954/ 55 First Series Chevrolet 6800 with restorable Wayne bus body. Cowl and front end sheet metal rough; running gear unknown. Former L.F. Martin school bus used in North Raymond. Truck is in New Gloucester. Owner asking scrap value for vehicle. Would prefer it not be scrapped. Contact C Hoak (207-522-7088) for pictures. Contact Eric Dacy at 207-926-3752 to view/ purchase.

For Sale: 1945 ? Chevrolet 1-? ton truck. Truck is in Windsor. Asking \$3500. Call 207-549-3541for more information.

For Sale: 1947 KB-5 International w/working potato barrel hoist and 8 wooden barrels. Contact John Ellingwood Sr. 207-651-7436

For Sale: 1997 GMC Diesel Dump Truck, 3500 series, 5 speed OD, PTO HD hoist, 68 K , 8'-0" Warren HD dump body with new floor, and GVW is 10,000# Price : First \$5,500,00 owns it, many new parts, FOB Sabattus, ME. Lars Ohman (CELL 207-376-7993 or 207-375-6515 leave a message)

President - John Ellingwood Jr. Cell (207) 590-2298; email: jellin@sacoriver.net

Vice President - Wayne Devoe Jr. 796 Main St. Waterboro, ME 04087; (207) 318-0323; email: wdjr62@hotmail.com

Secretary - Diane Munsey, Rusty Fender Estates 785 River Road, Dresden, ME 04342; (207) 737-2997; email: munsandi@gmail.com

Treasurer - Jamie Mason 104 Falmouth Road, Falmouth, ME 04105; (207) 949-1360; email:haroldjmason@gmail.com

Director - George Barrett 2 Country Charm Rd. Cumberland, ME 04021; (207) 829-5134 cell 671-2666; email: sheepsco@gwi.net

Director - Cheryl Billings 1031 Pinkham Brook Rd; (207) 353-7209; email:cherylbillings55@gmail.com

Director - Clayton Hoak 299 East Stage Road, Pittston, ME 04345; (207) 582-3224; email: 1948reo@roadrunner.com

Director - Peter Mullin 200 Stanford Street, South Portland, ME; 04106 (207) 767-6080; email: wfd44@maine.rr.com

Director - Bob Stackpole RR 1 Box 2000, Cushing, ME 04563 email: stack123@roadrunner.com

DUES NOTICE - Membership Renewal & Update Form
Please sign me up for another years worth of membership in the Pine Tree Chapter, ATHS.
Membership in the American Truck Historical Society is required.

Name _____ *Date* _____

Street _____ *Phone* () _____

City _____ *E-Mail* _____

State _____

Zip _____

Pine Tree Chapter Dues of \$10.00 run from January to December.

Mail to: Pine Tree Chapter ATHS
C/O Jamie Mason
104 Falmouth Road
Falmouth, Maine 04105

COMING SHOWS AND EVENTS

March 20, 2016 Pine Tree Chapter Annual Meeting at Owls Head Transportation Museum. More Info next month

May 26 - 28, 2016 ATHS National Convention, Salem, OR

June 17 & 18, 2016 ATCA Truck Show Macungie, PA

July 23 & 24, 2016 Owls Head Truck and Tractor Show Saturday and Sunday

August 6, 2016 ATHS Green Mt. Truck Show Bellows Falls High School 8:00 AM to 2 : 00PM

August 21, 2016 Barrington Old Truck Meet Deering, NH (south of Hillsborough)

October 16, 2016 ATCA New England Chapter, Lancaster, MA

Pine Tree Chapter ATHS
c/o George Barrett
2 Country Charm Rd.
Cumberland, ME 04021