Vol. 1 Fall 2003

FISH EXPO ISSUE

MER EQUIPMENT

The MER made Mechanic

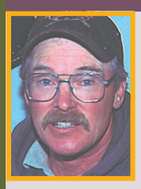
MARINE ENGINE & REPAIR *quarterly*

news you can use:

Engines–Generators–Transmissions–Exhausts
Troubleshooting–Service–Parts–& Ivan Fox

Prime Movers

Engines—Bob Dolan's Deere



"I wanted to buy a Deere and I wanted MER to sell it to me," says Petersburg fisherman Bob Dolan, a satisfied MER customer for 30 years "and never been disappointed."

"I wanted the Deere because of the reputation. **John Deere is the most popular engine in Petersburg right now–I don't know if there's another new engine put in a boat here other than a Deere.** I was impressed with the performance.

"The bottom-line is it's an in-line 6-cylinder internal-combustion diesel engine, and any piece of equipment can be well-designed in the factory but the difference is how it's serviced. **That's why I bought from MER. They have been my source of power through two different boats in nearly 30 years–three engines and a rebuild–and when I need a genset for my house I'll go to them.**

"Years ago everybody was putting Jimmies in, taking gas out," Dolan recalls, calling the old GMCs "common as mosquitoes in a swamp" back then. "Engines out of the war, the '40s–past their time now. They said you could get parts for a Jimmy in a drugstore. Their wave has kind of gone by.

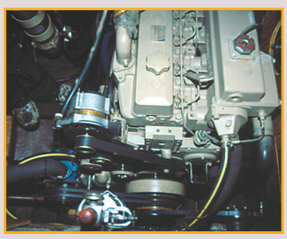
"Deere looks poised to really play a major part in the power of Alaska commercial fishing. Spoken word from those who have 'em. Can't get better advertising than that."

Dolan's fish history reaches back more than 40 years: He served on the Alaska delegation for the 1985 U.S,-Canada salmon treaty negotiations, and even showed up as the "Bob" in *Alaska Blues*, Joe Upton's late-'70s Southeast classic about fishing the Inside Passage. Long a gillnetter and halibut longliner, running his Deere into the new fish reality he also bought a power-troll permit this year: "Nothin' stays the way it used to be forever."

Mechanically inclined from an early age, Dolan built most everything on the *Jaleo's* Ohima hull back in '82. Cutting out a bulkhead in 2000 to install the John Deere 6068-Turbo 225-HP, he replaced the Isuzu he'd had for 20 years.

While praising his Isuzu 120-HP as "a great little engine that served a long, long time," he says, "when it finally failed I was two weeks away from the beginning of the salmon season. Think I was desperate? You call a guy you know, who's a personal friend, and has the resources to help. I called Bob Allen.

"'Hey, Bob, I'm in trouble.' Faxed measurements back and forth–the right flywheel, all this stuff has to interface. So Bob helped me with all that. It was really sitting down with him on the telephone and brainstorming everything I'd need in one package. Cost 160 bucks to get it here and had everything I needed to put it in myself.



"Got the Deere on a Sunday, started her up on Thursday, and fished the following Sunday. I do have a long, good, and valued relationship with them, and without that I don't think I could've done it.

"They knew that I actually needed it yesterday. It's nice to have a guy who knows what it's like to fish.

"Every time I needed help I reached for my cell phone with my dirty, greasy fingers and dialed him up.

"It's a strong engine. I got no complaints about it. It starts quickly–I don't think it makes a single revolution before it starts. I love it. "I almost doubled the horsepower and reduced the fuel consumption. People are gonna think I'm blowin' smoke but it's true. I'm burning less fuel per week but running more horses. Everyone who has a Deere marvels at its efficiency. And those who don't have 'em wished they did."

"I've had the Deere for 2½ seasons–a little over 3000 hours–and it's been flawless in its performance. Just changing oil and keeping the filters clean, so it has nice, clean fuel. "It doesn't smoke–very clean and tight in the engine room so no dripping oil. It just sits there and works; doesn't make a mess. A friend's had one in five years and it has yet to burn its first teaspoon of oil.

"It is pretty quiet. It has a deep throaty sound at its lower RPMs.

"When I push the throttle forward, there's no stopping it. When that turbo kicks in, this one says, 'Bring it on.' It's got honest horsepower, honest horses. It really has performance on the upper end. It's smooth and it's quiet and just loves it up there"

MER is a factory-direct parts, service, and warranty supplier for Deere, building a full line of generators and propulsion packages. We've made a big investment in John Deere parts inventory so we can supply your immediate service needs with our 24-hour service. Two of the parts crew have worked with Deere for nearly a decade, so give us a call and we'll rig you out with what you need.

JOHN DEERE

Nothing Runs & Runs & Runs Like a Deere

Veteran fisherman Bob Dolan changes oil on the MER John Deere 6068 Turbo he put in his 34-ft. fiberglass salmon/halibut boat, *Jaleo*: "This one says, 'Bring it on.' There's no stopping it."

Gearbox

Transmissions

FYI

ZF MARINE

ZF Marine bought Hurth Transmissions, changing the old numbers and names over to ZF. We've also listed these conversions on our website.

Old Hurth Model	New ZF Model
HBW40	ZF4M
HBW50	ZF5M
HBW100	ZF10M
HBW125	ZF12M
HSW125H	ZF12
HBW150	ZF15M
HBW150V	ZF15MIV
HBW150A	ZF15MA
HBW250	ZF25M
HBW250A	ZF25MA
HSW250A	ZF25A
HSW250H	ZF25
HBW360A	
HBW360H	Discontinued Model Remans. Available
HBW450	
HBW630	
HSW450D	ZF45C
HSW450A	ZF45A
HSW450H	ZF45
HSW630D	ZF63C
HSW630A	ZF63A
HSW630H	ZF63
HSW630V	ZF63IV
HSW800D	ZF88C
HSW800A2/A3	ZF80A/80-1A
HSW800V	ZF80IV/80-1IV

We offer MER-made and remade trannies–used, remanufactured, and consignment–with inventory updated regularly, so check back often.

MER's Maids & Men

Meet the MER Crew—GM Mike Hoyt

Meet the man you're likely talking to when you call MER for help at all hours–General Manager Mike Hoyt. This man can troubleshoot an engine by phone and calm the frazzled fisherman at the other end all at the same time with a patient, quiet competence. He's been known to diagnose a problem by the sound of the ailing engine over the cell phone:

"A lot of it will be an obvious problem, they just need guidance on where to look for the problem, even if I have to take them one step at a time. Fishermen aren't always mechanics so they have a hard time troubleshooting. They know fishing; I know engines. I couldn't make a living fishing.

"I think our strong point is we can talk about the product. When you're in the middle of your season you can't have your compressors down. And we ship parts; our service goal is to ship every order the day we get it.

"It's more important to take care of the customer after the sale–I will work on getting a guy parts before I'll sell a new engine. Better to take care of a guy you got out there than bring a new one in under your wing."

Hoyt comes by his knowledge the old way–training and lots of experience–in mechanics and construction machinery, engines, gensets, and trannies. Before coming to MER in 1986 he'd already worked as everything from parts runner to general manager for a Who's Who of Mechanics: Pacific Diesel Co., Craig Taylor, Hamilton Engine, and his own partnership, Controlled Power.

"I guess I got my diesel training in the military. Army. U.S. Working a construction machinery shop, '65-'68, Cam Ranh Bay, Vietnam. That's where I learned troubleshooting. We had to make it work. The officers didn't care what it took, just, 'I want it running.'

"I like troubleshooting a lot be-cause it's solving a puzzle. It's taking known information, and guide 'em into looking at different things to make a determination.

"Buying an engine or a generator set's not like buying a car–you sit in it, try it out–buying it to do a job. Lot of time a fisherman doesn't know what the whole job's going to be. We can talk to them, ask the right questions, find out what it's going to do. A lot of time they'll call for a generator set before they buy refrigeration; we have them go sort that out first.

"Doesn't matter the job. Sometimes it's just a hotel set, and we just find out the load it's going to be running.

"We extract the facts."

Sound of Silence

Exhausts, Mufflers, Silencers

"Sound is becoming a big issue," says MER's GM Mike Hoyt. "The younger guys can't hear their music and the old guys can't hear their engines."

Let's face it. If you've seen some of the good years fishing as well as some of the lean, then Sound Abuse may be catching up to you. MER can reduce the noise levels of your boat engine "up to 45 decibels," Hoyt says. "That's a ton because every 6 decibels is half the noise."

There are two types of silencers–Reactive and Absorption–with each effective at reducing different types of noise. Some are better with high frequencies like turbochargers, others are better with low frequencies. The best silencers use both methods to reduce audible noise. Due to space constraints we often recommend one of each type in the system for the best results.

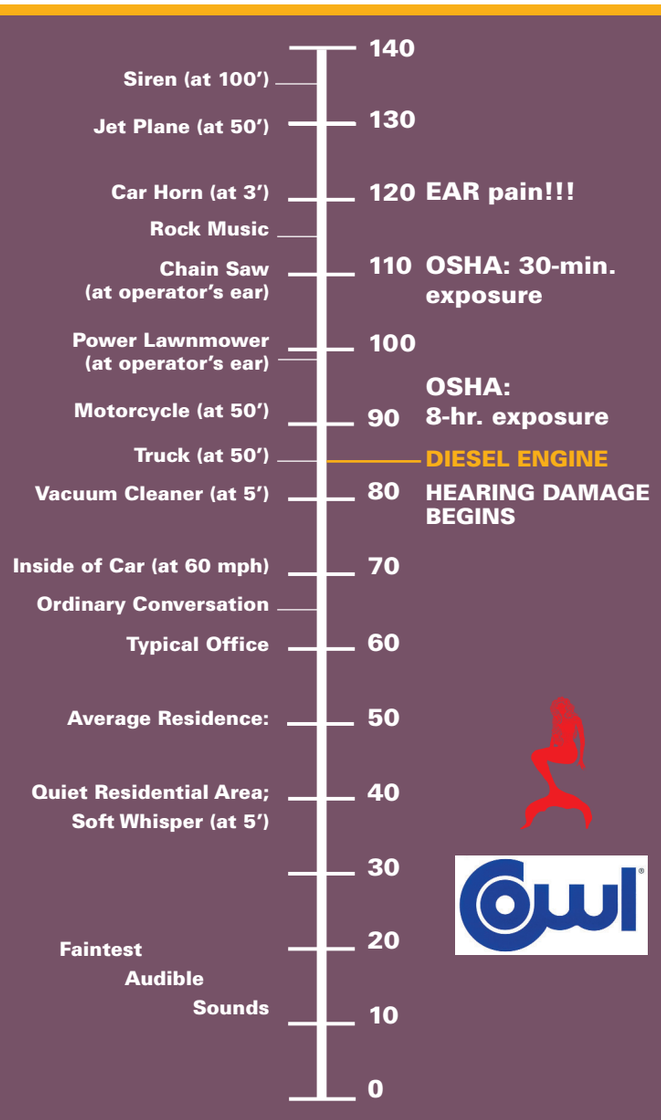
THE 4 SILENCER GRADES:
1. Industrial 2. Residential 3. Critical 4. Hospital

Check out the decibel graph at right to see what you've been listening to. Call to find out more–and call while you can still hear us. MER stocks exhaust-noise solutions by Cowl, EM, Nelson, and Universal Silencers.

DECIBELS: In the business of Sound, levels of loudness—expressed in decibels (dB)—are based on the science of frequencies and amplitudes of pressure waves traveling through air, water, or other medium. Different weighting systems come into play to level out the human ear's varying sensitivities at different frequencies. Most machinery–and vehicle-sound output is measured using a weighting class called dB(A), the (A) representing the frequency band audible by human ears.

The scale at right shows sound levels from a common workboat engine compared to other familiar sources of noise.

Noise & The Decibel Scale—dB(A)



Sources:
John Deere Engine Application Guidelines, and MER

Shooting Trouble

Solutions to Problems—Smoke Analysis

Troubleshooting by Smoke Analysis

EXHAUST SMOKE COLOR

WHITE SMOKE

- **STEAM**
  - blown head gasket
  - cracked block
  - cracked head
  - leaking intercooler

  musty or sweet smell is water or antifreeze
- **FUEL**
  - insufficient compression
  - low cylinder temperature
  - faulty injector
  - low cetane
  - water in fuel

  nasty, pungent smell is fuel

BLUE SMOKE (LUBE OIL)

- worn or broken rings
- scored cylinder
- leaking valve-stem seals
- leaking turbo seal

BLACK or GREY SMOKE

- **INSUFFICIENT AIR**
  - dirty air filter
  - restricted air inlet or exhaust
  - incorrect valve clearances
  - inadequate engine-room ventilation
  - defective turbocharger
  - restricted exhaust
- **EXCESSIVE FUEL**
  - improper injection timing
  - improper rack adjustment
  - overloaded
  - faulty injector
- **Other**
  - engine overloaded
  - fuel too heavy

MER Gensets

Southeast seiner Bruce Marifern runs a MER-made 20-kw generator aboard his 48-ft. Delta, *Freedom*: "I'm a satisfied customer. I've put 15,000 hours on that—just filters and oil. Just maintenance."

Smooth Operator

Generators

Bruce Marifern powers a 15-ton electric-drive Integrated Marine RSW system with "a little MER genset down there," he says. "Put it in there in '95—eighth season on it—it's never missed a beat. Never put a belt on it."

"Fifteen tons of reefer on a 20 K-dub. So that 20 K-dub's maxed down there. And I think holding up quite nicely. Friend of mine told me it could be done—marginal, but it's what came with the boat."

When asked if he wished his genset were bigger, Marifern says, "Some days. Some days runnin' around only need five. Those days glad it's a 20. More fuel-efficient.

"It's at capacity when we're chilling fish but only chilling fish July and August. Other times running sodiums, hotel load. Really don't have any needs, other than when Josh plugs in his guitar."

From the Founder ... Ivan Fox Remembers

For many years vice president of the Alaska Division for the New England Fish Company (NEFCO) in charge of Alaska canned-salmon production, Ivan ran several Alaska canneries—Uganik, Egegik, and the old *Kalakula* (pictured) among them—before retiring in '97 from the then-Nelbro Packing Co. With partner Larry Schusted—"a very competent mechanic"—Fox opened up a little marine engine and repair shop in an old Chinese laundry on Ballard Avenue in 1964, now the home of Doc Street Brokers. "I knew a lot of people in the business. When fishermen need something they need it yesterday."

Early on, MER rebuilt a lot of 671-Jimmies, Fox recalls. "Had 'em in WWII in all the landing crafts. They were expendable after the war." After MER started carrying the Isuzu line in '65 he says they installed an Isuzu DA220 on the dock in Uganik in 1968 and "never touched it since. Still use it. Fires right up. Very seldom you ever hear a complaint about Isuzu."

Of his first years fishing, seining in the early '40s, "I was skiffman," Fox says. A 16-ft. skiff. "We had oars." He remembers the captain going into the beach: "He had a 140-Chrysler, screaming at me, 'Hold that hook, hold that hook.' No way I could compete with that 140 HP. Finally got a 5- or 10-HP outboard and I was in seventh heaven.

"In those days we got 2¢ a fish for pinks and 5¢ each for reds. Not so much different than today. Difference is we used to pay 22¢ a gallon for our diesel fuel, beer was a nickel a bottle at the grocery store."

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