

Add-On Grapple For Loaders & Skid Steers

ANBO Manufacturing has created a series of grapple products to manage a variety of farm tasks. ANBO specializes in providing grapple products that use a lightweight high-strength steel that preserves the lifting capacity of the machine to allow it to carry heavier loads.

The cornerstone of ANBO's product line is the GR series. The GR Series comes in sizes ranging from compact tractors (GR-M), to mid-size machines (GR-S and SH), to full-size tractors, skid steers and wheel loaders (GR-X and GR-HX). This series of grapple rakes provides for product with jaw openings from 36 in. to over 80 in. The widths range from 3 to 10 ft. wide and are offered with a variety of different tine spacings to optimize the products for a variety of work and soil types.

ANBO has added to the product line by creating a hybrid bucket grapple (BG-S and X). The new bucket grapple is unique and will manage a variety of farm tasks.

Duane S. Kaler of Chattaroy, Wash., purchased a ANBO Bucket Grapple last April, and said he is impressed by its usefulness. "We recently purchased a 41-acre spread and needed a tool for the tractor that could effectively clean up brush, hay, and other small materials around the yard," Kaler says.

Kaler uses his grapple as an attachment on his tractor's 72-in. bucket – bolted securely in place. "Though I find the bolt-on method convenient in case I need to remove it, I don't think I'll ever take it off because it's so handy."

The recently introduced ANBO Bucket Grapple can be custom-sized to most buckets and is designed with patent pending, raking tines that allow raking to be done in a general backward motion and forward as well.



ANBO's full-size tractor grapple.

Kaler says the raking tines prove beneficial in many situations, whether it be cleaning up excess grain or hay, clearing the land of large brush for his alpaca to roam, or simply tidying up messy areas.

According to Ron Maestas, ANBO Manufacturing operations and engineering manager, the hydraulic grapple rake, which is mounted on a dirt bucket through either a bolt-on method or welding, allows tractors the ability to pick up heavy-sized loads and small debris at once.

Yet, like the GR series of grapple rakes offered by ANBO, the ANBO Bucket Grapple is also made of the special AR400, a steel almost two times the Brinnell rating as that of T1, thus giving the grapple lighter weight, yet superior strength. The tensile strength of the metal is also 50% greater than T1, therefore enabling the grapple to handle larger, heavier payloads without the possibility of bending the tines. This steel, Kaler says, has helped him carry loads that couldn't otherwise be managed.

Jim Gurnea, owner of a 160-acre farm in Ione, Wash., says this steel is one of the things that makes the ANBO's Gapple prod-



Patent pending ANBO Bucket Grapple, above and below, is fitted with tines that rake in forward or reverse.



uct line so useful and unique.

"Anytime you can reduce weight and maintain strength, it's a good thing," Gurnea says. "While AR400 is tougher steel for the manufacturer to work with, it adds the component needed to create a tool that is both lightweight and can hold. There's less mass to move with a hydraulic cylinder."

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Reader Inquiry No. 189

“Water Muffler” Cleans Up Diesel, Boosts Mileage

The GreenPower Muffler boosts diesel mileage and extends engine life while helping to meet federal clean air regulations. Even better, it doesn't need special additives or expensive rare earth catalysts, and you don't have to burn ultra-low sulfur diesel fuel, says inventor and developer Julius Rim.

"This technology uses plain water," says Rim, a former senior research engineer at General Motors Technology Center.

Rim's technology is called hydrated EGR (exhaust gas recycling) with prices starting at \$1,850. That compares favorably to the \$9,600 urea additive alternative that's expected to become the new U.S. standard. With EGR systems, diesel fuel particulates

are filtered out and a portion of the exhaust gas is recycled back through the engine. It helps reduce NOx (nitrogen oxide and nitrogen dioxide) emissions.

"My system uses waste heat from the muffler to turn water to vapor and pipes it to the air-intake ports along with the EGR gases," says Rim.

He says his technology has been shown to improve fuel economy by 12 percent, decrease NOx by 51.4 percent, decrease diesel particulate matter by 89.2 percent, and prolong engine life. He adds that if retrofitted to all diesel engines and installed on new ones, it also would eliminate the need for ultra-low sulfur diesel fuel.

"Current regulations requiring no more

than 10 parts per million sulfur could be changed, allowing 50 parts per million sulfur," says Rim. "This alone would reduce diesel prices substantially without impacting the environment."

Rim is currently producing and testing prototypes. He recently received a \$740,000 grant from the Port of Los Angeles for a demonstration of his technology on ocean going vessels.

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