

Tractors Without Drivers?

It is going to happen, tractors and machinery operating without drivers in the cab. You cannot order one from your dealer today, but robotic tractors could be available for purchase in the next 5 years. On-board computers already have the capability to control many tractor functions. Add a little more hardware, a GPS-powered guidance system, some navigational software and you've got a tractor that doesn't need you warming up the cab seat.

How is this going to work?

(GPS Auto-Guidance)

Steering will be a combination of:

-Satellite based global positioning (GPS) data

-Intelligent computer systems put to work in a hydraulic system, which will control steering and other functions. The machinery is also equipped with inertial



sensors to determine whether the vehicle should go straight, curvy, or otherwise.

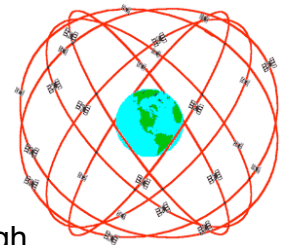
Then there are the CAN

(Controller Area Networks) ports for communication. With the sub-systems they control the hydraulics for steering control/feedback for display to the machine operator.

There is also a second CAN communication port designed to interface with a display screen, from there it receives commands from the equipment operator. Making it possible to run the program off of a simple push button display or a color touch screen computer running on an embedded Windows XP operating system.

How accurate is the Robot?

This system offers the ability to use data from both the 24 U.S. GPS satellites and the 17 Russian GLONASS satellites. That means there are always enough satellites available to provide 1 centimeter- accurate positioning. This system is so fine-tuned it accommodates for the bumps and shocks inevitably encountered in off-road operation. These robots will be able to operate in total darkness just as efficiently as it does in daylight.



Feedback

What are your thoughts on this new technology?

Send your feedback to

dirkewing@rdhs.com or snail mail to 1431 West 5th St. Chico, Ca 95928

Hydraulics & Pneumatics July 2007 – Paul Heney
Volume 60, No. 7

Statues in Parks of Soldier on a Horse

Horses *both front legs* in the air, means soldier died in battle. Horses

one leg in the air, means soldier died as a result of wounds from battle.

Horse has *all fours* on the ground, means soldier dies of natural causes.



The New Almond Rule

Is cooked really raw?

In January The Almond Board of California announced that starting September 1, 2007 all almonds must be pasteurized. This is due to the Salmonella outbreaks in 2001 and 2004, which were traced to raw almonds.

The Board is now asking the government for another six-months before enforcing the rule. Farmers are having a hard time adjusting to meet the September deadline. They are looking at March 1, 2008.



Raw vs. Pasteurized

The Boards states that “raw almonds that have been pasteurized do not differ in any significant way from untreated raw almonds”.

What does pasteurization mean?

“A process also used for milk, juice and eggs – It is a process of heating liquids for the purpose of destroying viruses and harmful organisms such as bacteria, protozoa, molds, and yeasts.

Pasteurization is not intended to kill micro-organisms (pathogenic) in food. Instead, it aims to reduce the number of viable organisms, so it is less likely to cause disease.”

Wikipedia, Pasteurization

In the “Almond Action Plan, Pasteurization Treatment” states that the treatment chamber temperature is not to exceed 125 F (52 C) for 4 hours. You can find more information in the [Almond ABC of California](#).

Raw, as understood by the food community, is food that is kept below 108 degrees.

Does that mean that we will be falsely labeling our Almonds? Certain organizations will be able to delay pasteurization because of the type of food product they produce such as granola gars. Inevitably all almonds will have a new definition “cooked raw almonds”, but they will be labeled “raw almonds”

An Update:

The Almond Board of California submitted a request to delay the new almond rule. *The vote is in*, USDA denied the request and the new rule is now in effect as of September 1, 2007.

Referenced from: CA Almond Growers Seek Delay of Raw Rule, By Garance Burke. August 7, 2007

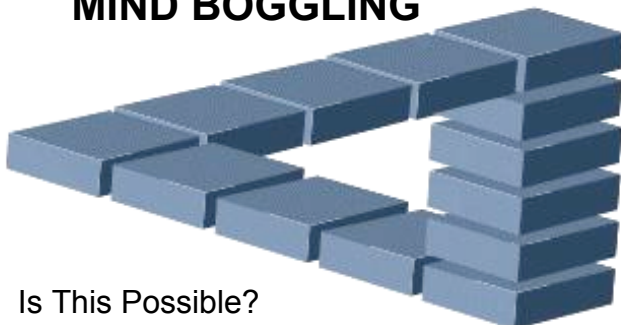
HONEY ROASTED ALMONDS

- 2 c. whole almonds, skins on
- 1/4 c. sugar
- 1/2 tsp. salt
- 2 tbsp. honey
- 2 tbsp. water
- 2 tsp. almond or vegetable oil

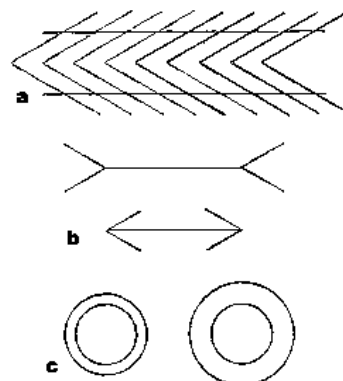
Spread the almonds in a single layer in a shallow ungreased baking pan and place in a cold oven. Bake at 350 degrees, stirring occasionally, until the internal color of nuts is tan (12 to 15 minutes). Remove from oven and set aside.

Thoroughly mix the sugar and salt. Stir together the honey, water and oil in a medium size pan and bring to a boil over medium heat. Stir in the roasted almonds and continue to cook and stir until all the liquid has been absorbed by the nuts (about 5 minutes). Immediately transfer to a medium bowl and sprinkle sugar mixture over all and toss. Spread on wax paper and cool.

MIND BOGGLING



Is This Possible?



- a. Two long lines are parallel
- b. Middle lines are same length
- c. Center circles are exact same size

IS THAT A FACT

Apples are more efficient than caffeine in keeping people awake in the mornings!

Hippopotomonstrosesquippedalio phobia- Means **Fear** of long words.

According to Genesis 1:20-22 the **chicken** came before the egg.

If you keep a **goldfish** in the dark room, it will eventually turn white.

Coca-Cola was originally green.

Honey is the only food that doesn't **spoil**.

Sherlock Holmes never said "Elementary, my dear Watson".

Only **female** mosquitoes bite.

Your **stomach** has to produce a new layer of mucus every two weeks otherwise it would digest itself.

In 1958, Thomas Watson, the chairman for IBM forecasted a world market for only 5 **computers**.

One gallon of used **motor oil** can **ruin** approximately one million gallons of fresh water.

You're born with **300 bones**, but when you grow to be an adult, you only have 206.

Sound travels 4 times faster in water than in air.

CLAMPING DOWN
Clamp-style collar

Clamp-style shaft collars are a simple design with easy installation. They are used as mechanical stops, locating components and bearing faces. They come in a one or two-piece design, both using socket head cap screws. With Set Screw type collars, the set screw protrudes into the shaft, but the clamp-style collar screws act to compress the collar and lock it into place around the shaft. They work well on practically any shaft. The design is easy to use and keeps the shaft from being damaged. It also

creates a holding power that is nearly twice that of a set screw collar. Two-piece clamp styles can be disassembled and installed in position without being slid over the shaft or removing any components. It also provides the most holding power of all the shaft collars. Clamp-style collars have been around since World War II. They were used in bombsights and guiding systems. No one knows who invented the clamp-style collar.

Information gathered from Wikipedia and William Hewitson, Director of Mfg and Engineering, Ruland Mfg Co., Inc. www.ruland.com



One piece clamp-style collar

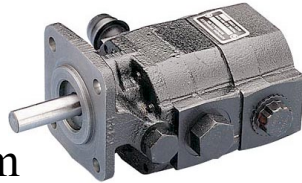


Two piece clamp-style collar

2 Stage Log Splitter **PUMPS**

In stock NOW!

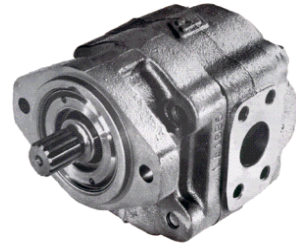
6 sizes to
choose from



5 GPM to 28 GPM

We Specialize in the
Complete Sales and Service of:

Hydraulic Cylinders
Pumps
Valves
Motors
Hose
Fittings
Adapters



R&D: Your ONE-STOP-SHOP for fabrication, machining and hydraulic needs!

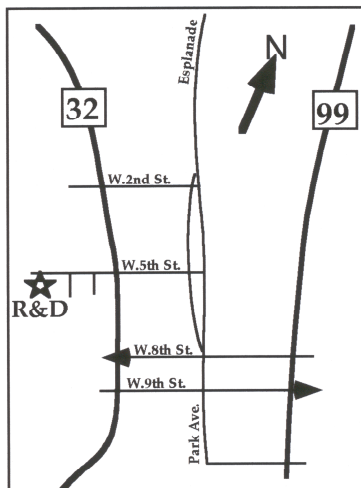
R&D Hydraulics

Manufacturing and Machine Co.

1431 W. 5th Street, Chico, CA 95928

(530) 345-4685 1-800-200-4685

www.rdhs.com



HOURS: Monday - Friday 7am to 5pm Saturday 7am to 12 noon