



TRACTOR TORTURE TRACK

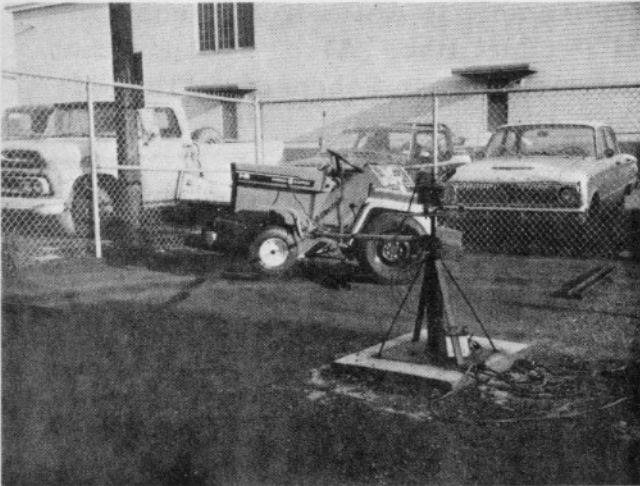


Photo shows a pre-production I-5 industrial tractor being life tested on the Bldg. 803 torture track. This test is only one of the many extensive tests the I-5 was put through before production started. The torture track accelerates the life of the tractor and identifies possible weak points to be corrected prior to production. In this test, the tractor runs 24 hours a day on a ten foot tether over eight two-inch bumps at the rate of four laps per minute.

A little "black box" at the center of the track contains a time delay shut-off and the battery charger controls. The shut-off is triggered by mechanical or electrical failure and also if the tractor does not complete a lap within 30 seconds.

The battery charger operates while the test is underway. Once a day the vehicle is stopped to check the batteries and look for evidence of failures. Measurements taken during the test indicate that certain parts of the tractor are subjected to forces in excess of 5 G's. This is far beyond the design intentions and normal use but will help us build a high quality, more competitive tractor.

"RETURN TO NEUTRAL"



Our engineering group has cooperated with Design News in publishing an article that appears in last month's issue. Design News is a trade magazine which is widely circulated and read in technical/engineering circles. We didn't give away any trade secrets since the items discussed were already patented and legally protected.

We qualified for this publication recognition through having come up with a new and unique electrical circuit design in our "RETURN TO NEUTRAL" system. As many of you already know, we are the leaders in the industry in safety because of the required function. If any unusual event is experienced by the operator, all the electrical systems are shut off and remain that way until each control is returned to

neutral. It is encouraging to know that with all the technological advance being created in so many fields today, that we have rated recognition, even if it isn't for a "moon rocket".



