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Autolift

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AUTOLIFT

prepared for

Professor Donald J. McAleece
Manufacturing Technology Department
Indiana University-Purdue University at Fort Wayne

by

Patrick F. Murphy

April 18, 1983

ABSTRACT

The autolift measures 49 inches by 58 inches without the mechanical Hi Lift Jack or 49 inches by 100 inches with the Hi Lift Jack attached. The autolift callapses to 6½ inches and raises to 17¼ inches. The autolift can lift 4,000 pounds. The block and tackle principle coupled with the scissor jack principle gives the mechanical advantage needed so the Hi Lift Jack capable of lifting 7,000 pounds exerts enough force on the steel wire rope, breaking strength 8,520 pounds, to raise the auto 17 inches off the ground allowing the wheels a 6 inch clearance. The autolift can be rolled underneath the car. The autolift prototype cost is $387.45. Prototype contracted out to be designed, built, and tested is $3,557.45. Selling price of autolift if 300 produced is $613.86 to $708.70 plus shippage.

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