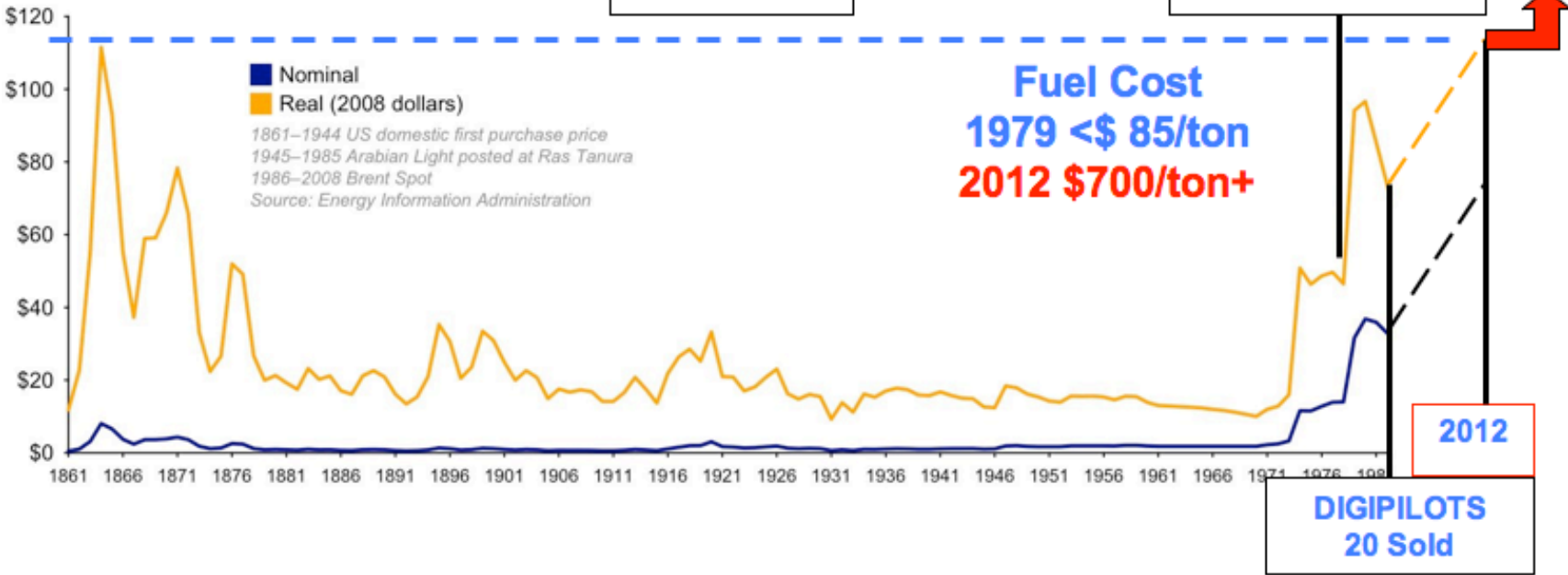


AutoMATE Marine  
Addendum

**ESCALATING OIL PRICE**

**\$100/Barrel**

**DIGIPILOT  
Development  
Started 1976**



**Table-Installed DIGIPILOT Payback Period of Complete AutoMATE Systems for 1<sup>st</sup> 17 Vessels, and Fuel Saving Only for 3**

SHIP TYPES DIGIPILOT SOLD	SHIPOWNER	FLAG	SHIP's NAME	Annual Fuel Cost @ \$85/ton	\$ Savings DIGIPILOT @ 2%	Payback @ \$125k in months
Bulk Carrier-40K dwt	American Steamship	US	MV St Clair	\$2,864,500	\$57,290.00	26
VLCC-253K dwt	EXXON	Neth	Esso Saba	\$4,250,000	\$85,000.00	18
VLCC-250K dwt	EXXON	Neth	Esso Nederland	\$4,250,000	\$85,000.00	18
VLCC-250K dwt	EXXON	Neth	Esso Europoort	\$4,250,000	\$85,000.00	18
VLCC-250K dwt	EXXON	Neth	Esso Esso Bonaire	\$4,250,000	\$85,000.00	18
VLCC-286K dwt	Texaco	Panama	Texaco Brazil	\$4,250,000	\$85,000.00	18
VLCC-286K dwt	Texaco	Panama	Texaco Ireland	\$4,250,000	\$85,000.00	18
VLCC-275K dwt	Texaco	Panama	Texaco Africa	\$4,250,000	\$85,000.00	18
VLCC-269K dwt	Texaco	Panama	Texaco South Africa	\$4,250,000	\$85,000.00	18
VLCC-269K dwt	Texaco	Panama	Texaco Veraguas	\$4,250,000	\$85,000.00	18
VLCC-264K dwt	Texaco	Panama	Texaco Italia	\$4,250,000	\$85,000.00	18
VLCC-264K dwt	Texaco	Panama	Texaco Japan	\$4,250,000	\$85,000.00	18
VLCC-235K dwt	Texaco	Panama	Texaco Nederland	\$4,250,000	\$85,000.00	18
VLCC-226K dwt	Texaco	Panama	Texaco Panama	\$4,250,000	\$85,000.00	18
VLCC-250K dwt	Pennzoil (Zapata)	US	Newport News NB#	\$4,250,000	\$85,000.00	18
VLCC-250K dwt	Pennzoil (Zapata)	US	Newport News NB#	\$4,250,000	\$85,000.00	18
VLCC-260K dwt	West Coast Shipping	Liberia	Coalinga	\$4,250,000	\$85,000.00	18
Tanker-80K dwt	Sunoco	US	America Sun	\$2,864,500	\$57,290.00	26
<b>Modular Automate Subsystem for FUEL SAVING ONLY, e.g. DIGIPILOT ONLY NO DIGINAV or DIGIPILOT</b>						<b>Payback @ \$125k</b>
<b>RO/RO-NO SALE</b>	<b>Naviera (CHEAP FUEL)</b>	<b>US</b>	<b>Puerto Rico</b>	<b>\$340,000</b>	<b>\$6,800.00</b>	<b>44.1</b>
Containership 28kt	American President	US	Avondale NB # 2329	\$52,500,000	\$1,050,000	0.3
Containership 28kt	American President	US	Avondale NB # 2330	\$52,500,000	\$1,050,000	0.3
Containership 28kt	American President	US	Avondale NB # 2332	\$52,500,000	\$1,050,000	0.3

A complete iotron Corporation AutoMATE System consisted of DIGIPILOT (\$75,000), Anti-Collision, and DIGIPILOT/DIGINAV (\$50,000 each) totaling \$125,000. The payback was determined for the first 17 systems sold. A 28 kt containership customer bought only the DIGIPILOT because they already had a Magnavox Transit Satellite system installed to furnish the radio navigation and course to steer, so the American President cost was only \$25,000 and the complete control was using the AutoHELM cruder controller for minor changes to the commanded course to steer for making minor “early and bold” (usually a few degrees) avoidance type maneuvers in trans Pacific crossings where the fuel saving was very pleasing, particularly with payback of 0.3 months, practically on one trip!

The same data in the RTCM paper was used to produce a comparison table called then and now due to the oil price increases but using the Modular DIGIPILOT ONLY for establishing the payback period. The same data in the RTCM paper was used to produce a comparison table called then and now due to the oil price increases but using the Modular DIGIPILOT ONLY for establishing the **THEN and NOW** payback period shown in the table.

# Then & Now: Ship's Fuel Savings Payback for Full AutoMATE System vs. DIGIPILOT

	Iotron AutoMATE System vs. AutoHELM ONLY				AutoMATE-DIGIPILOT option @ \$25k is EXTRA		
	Avg. Annual Fuel Consumption @ \$85 / ton Av US Bunker 1979	Annual Savings @ 2% using DIGIPILOT Fuel Saver	Payback months @ \$ 125,000 AutoMATE	Payback months @ \$25,000 AutoHELM	Avg. Annual Fuel Consumption @ \$700 / ton US Bunker 2012	Annual Savings @ 2% using DIGIPILOT ONLY NO DIGIPILOT e-chart	Payback months @ \$25,000 DIGIPILOT
Type Vessel & Engine							
8,890 Ton Cargo Carrier 5,600 shaft H.P.	4,000 tons \$340,000	\$6,800.00	221	44	\$2,800,000	\$56,000	5.4
14,200 ton Cargo Carrier 22,000 shaft H.P.	8,570 tons \$728,450	\$14,569.00	103	21	\$5,999,000	\$119,980	2.5
26,000 Ton Bulk Carrier 11,600 shaft H.P.	7,000 tons \$595,000	\$11,900.00	126	25	\$4,900,000	\$98,000	3.1
90,000 dwt Tanker 25,300 shaft H.P.	33,700 tons \$2,864,500	\$57,290.00	26	5	\$23,590,000	\$471,800	0.6
150,000 dwt 30,000 shaft H.P.	50,000 tons \$4,250,000	\$85,000.00	18	4	\$35,000,000	\$700,000	0.4
SL7 Container Ship	75,000 tons \$6,375,000	\$127,500.00	12	2	\$52,500,000	\$1,050,000	0.3
VLCC 250,000 dwt	150,000 tons 13,000,000	\$260,000.00	6	1	\$105,000,000	\$2,100,000	0.1

Iotron fully adaptive AutoHELM ONLY \$25,000 for DIGIPILOT AND DIGINAV was \$125,000

AutoMATE Marine Systems Llc- DIGIPILOT e-HELM ONLY \$25,000 NOW optional DIGIPILOT on e-chart is only \$25,000 more for \$50,000 total