Flagship Fleet Management, LLC.

Replacement Analysis

Keep equipment too long and drive cost higher than the point of purchasing a new vehicle. Disposing of equipment too early and you lose some of the useful life further increasing cost. The general accepted way to determine the optimal replacement point is where cumulative maintenance cost starts to out-run the market value of the asset.

We all have a good feel for when equipment should be replaced. Our main challenge is how to sell the budget folks that it is better to spend now than run an aging fleet. Optimally managing the replacement of equipment can be the single most cost cutting measure we can do. It is at the core of what we are responsible for.

So were is this magical point in time and how do we quantify it? For each class?

1) Figure cost per mile by service year by equipment unit
2) Figure the average cumulative maintenance cost by service year & class
3) Figure the average yearly depreciation (Straight Line, or your option)
4) Graph the two and see where the lines cross, viola, the replacement point is found.

Determining cumulative maintenance cost requires figuring cost per use unit (miles, hours, days, etc.) Cost per use unit is determined by the taking the total cost to maintain an equipment unit by the number of use units (miles/hours). All values are compared based on the service year of the equipment. Flagship Fleet Replace provides the detailed cost per use unit (mile/hour) analysis to drive the vehicle replacement model. This enables fleet managers to review the data that makes up the cost per mile calculation, so managers can catch anomalies within different vehicle classes.

Cost Per Mile **Company: AS Bench mark class: PUC**

EQN	Dept.	Status	VYear	Orig. Cost	Serv Yr.	CYear	Dep. Value	Miles/Hours		HSE Labor	HSE Parts	CML WO	Fuel Cost	Maint CPM	Fuel CPM	Tot. CPM
185501	107106	5	1992	$14,625.00	12	2003	$0.00	METER	6,367	$436.50	$19.18		$700.93	$0.07	$0.11	$0.18
					11	2002		METER	2,522	$76.50	$8.18	$600.00		$0.27		$0.27
					10	2001		METER	1,585	$225.00		$12.50		$0.15		$0.15
					9	2000		METER	4,577	$355.50	$82.83	$220.75		$0.14		$0.14
					8	1999		METER	815					$0.00		$0.00
								3,173		**$273.38**	**$36.73**	**$166.65**	**$700.93**			
								15,866		**$1,093.50**	**$110.19**	**$833.25**	**$700.93**	**$0.13**	**$0.04**	**$0.17**
186712	635000	5	1993	$12,716.22	11	2003	$0.00	METER	4,968	$274.50	$235.14	$381.03	$541.13	$0.18	$0.11	$0.29
					10	2002		METER	7,305	$526.50	$81.54	$1,091.52	$84.50	$0.23	$0.01	$0.24
					9	2001		METER	8,128	$684.00	$381.63	$1,245.59		$0.28		$0.28
					8	2000		METER	8,829	$198.00	$37.87	$65.83		$0.03		$0.03
					7	1999		METER	2,645					$0.00		$0.00
								6,375		**$420.75**	**$184.05**	**$556.79**	**$312.82**			
								31,875		**$1,683.00**	**$736.18**	**$2,783.97**	**$625.63**	**$0.16**	**$0.02**	**$0.18**
190712	634000	1	1994	$13,878.00	11	2004	$0.00	METER	2,283			$128.60	$760.19	$0.06	$0.33	$0.39
					10	2003		METER	12,567	$49.50	$5.21	$795.15	$1,218.46	$0.07	$0.10	$0.16
					9	2002		METER	4,806	$90.00	$18.86	$32.95		$0.03		$0.03
					8	2001		METER	5,987	$90.00	$17.85			$0.02		$0.02
					7	2000		METER	9,604	$211.50	$127.94	$188.87		$0.06		$0.06
					6	1999		METER	2,938					$0.00		$0.00
								6,364		**$110.25**	**$42.47**	**$190.93**	**$989.33**			
								38,185		**$441.00**	**$169.86**	**$1,145.57**	**$1,978.65**	**$0.05**	**$0.05**	**$0.10**
191444	107123	1	1994	$15,993.00	11	2004	$0.00	METER	1,776	$333.00	$153.08	$27.77	$401.19	$0.29	$0.23	$0.52
					10	2003		METER	5,471	$364.50	$419.97		$560.45	$0.14	$0.10	$0.25
					9	2002		METER	7,296	$94.50	$13.38	$179.66		$0.04		$0.04
					8	2001		METER	6,867	$396.00	$76.34	$224.32		$0.10		$0.10
					7	2000		METER	2,677	$112.50		$56.90		$0.06		$0.06
					6	1999		METER	351	$45.00	$72.41			$0.33		$0.33
								4,073		**$224.25**	**$147.04**	**$81.44**	**$480.82**			
								24,438		**$1,345.50**	**$735.18**	**$488.65**	**$961.64**	**$0.11**	**$0.04**	**$0.14**

This report is also helpful in determining rates to be charged by class to different departments. Now forecasting is not the headache it used to be.

Flagship Fleet Management, LLC
Fleet Management Solutions

We Lead the way...

Contact:
Jeff Steinmetz
949-388-0795

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Replacement Analysis

We work with you to determine how to class your equipment and give the best information. The Fleet Replace module utilizes the class code within your fleet management system. Further, we will work with you to make sure costs that should not be included are filtered out (i.e.: accident data).

Each class of equipment in differing agencies can show a differing point of optimal equipment replacement. The optimal replacement point is the point where the valuation of the vehicle reaches the running sum of maintenance expense. For example, most light vehicle classes have an optimal replacement point hits in the 6th year of service. Vehicles that continue in service past this point will have maintenance costs that out run the value of the vehicle. The goal is to replace vehicles at the optimal replacement point for the most cost-effective fleet operation.

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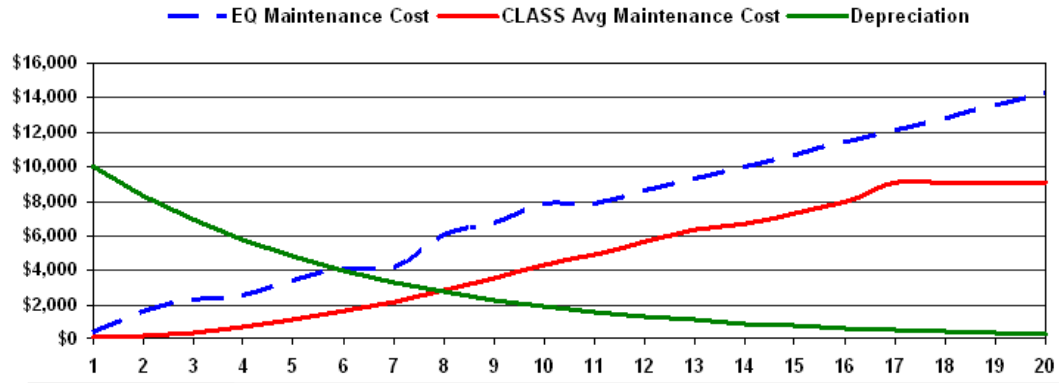
Replacement Analysis

3D Replacement - Class **Class: CPA**

Equipment Number	**185483**	Class Min Point:	4.1
Year/Make/Model	1992 / DODG / DAKOTA	**EQ Point Rank:**	**36.4**
In Service Date	8/1/1993	Class Max Point:	45.8
Original Cost	$11,775		

Diminishing Point of Return



Service Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Labor Hours		710	710	710	710	710	710	4	6	8
Maintenance Cost	300	1,550	2,245	2,515	3,371	4,022	4,072	5,998	6,670	7,810
Maintenance Cost - Class Avg. (CPA)	53	142	374	726	1,148	1,588	2,149	2,853	3,487	4,243
Resale Val. (Orig. $12,081)	10,027	8,323	6,908	5,733	4,759	3,950	3,278	2,721	2,258	1,875
Use Miles		710	710	710	710	710	710	375	1,889	2,409

Scoring

In Service	# Mon. In Service	Age Point	Current Meter 1	Usage Point	Maint Yr. 3	Maint Lst Yr.	Reliable Point	Original Cost	Maint Total	Maint % Cost	Repair Point	Severe Service	Point Total
8/1/1993	187	**15.7**	71,164	**7.1**	$695	$1,140	**1.6**	$11,775	$7,810	66%	**12.0**		**36.4**

Cost Per Mile

Serv Yr.	CYear	Mile/Hours		HSE Labor	HSE Parts	CML WO	Fuel Cost	Total Cost	Maint CPM	Fuel CPM	Total CPM
8	1999	METER	375	$166.50	$66.13	$67.80	$41.58	$342.01	$0.80	$0.11	$0.91
9	2000		1,889	$279.00	$240.58	$730.00	$173.47	$1,423.05	$0.66	$0.09	$0.75
10	2001		2,409	$355.50	$339.46		$254.35	$949.31	$0.29	$0.11	$0.39
11	2002		2,496	$270.00			$156.22	$426.22	$0.11	$0.06	$0.17
12	2003		2,762	$157.50	$6.32	$692.00	$308.77	$1,164.59	$0.31	$0.11	$0.42
13	2004		2,104	$405.00	$245.90		$257.15	$908.05	$0.31	$0.12	$0.43
14	2005		4,362	$42.00	$8.79		$529.94	$580.73	$0.01	$0.12	$0.13
15	2006		6,783	$966.00	$884.70	$75.00	$1,007.97	$2,933.67	$0.28	$0.15	$0.43
16	2007		3,252	$206.00	$44.11	$421.40	$587.19	$1,258.70	$0.21	$0.18	$0.39
17	2008		3,870	$676.00	$439.02	$25.00	$774.42	$1,914.44	$0.29	$0.20	$0.49
18	2009		737				$62.82	$62.82	$0.00	$0.09	$0.09
		31,039		**$3,523.50**	**$2,275.01**	**$2,011.20**	**$4,153.88**	**$11,963.59**	**$0.25**	**$0.13**	**$0.39**

Flagship Approach to Replacement

The first step is to identify at the class level where the budget should be applied. Step two is to identify with-in the class which equipment to replace. Within the replacement analysis tool we provide the overview and the detail to do just that.

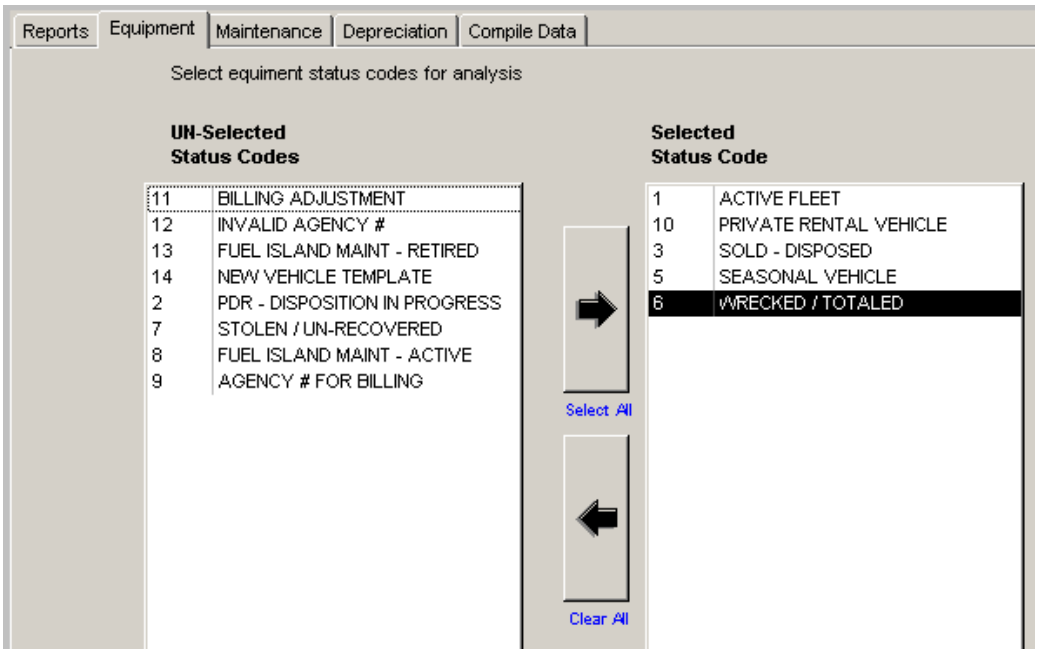
The Vehicle Replacement report calculates the total cost by service year and compares it with the market depreciation of the asset. This provides a guide for when the cost of

Contact:
Jeff Steinmetz
949-388-0795

maintaining the asset exceeds market value. The maintenance less market value can be considered the loss for allowing equipment to go beyond this point.

The Vehicle Replacement report will determine the direction. The Cost per mile report will determine the point on the map. The cost per mile report will rank equipment based on cost. Equipment that costs the most (with-in the class) should be replaced first. Replacement can be as easy as select all the defaults and run the reports or we can change settings to zero in exactly on the specific costs and depreciation that best match your current fleet situation.

The equipment and maintenance selection has a similar look and feel to the controls in Fleet Navigator for selecting the specific type of equipment and maintenance for complication.



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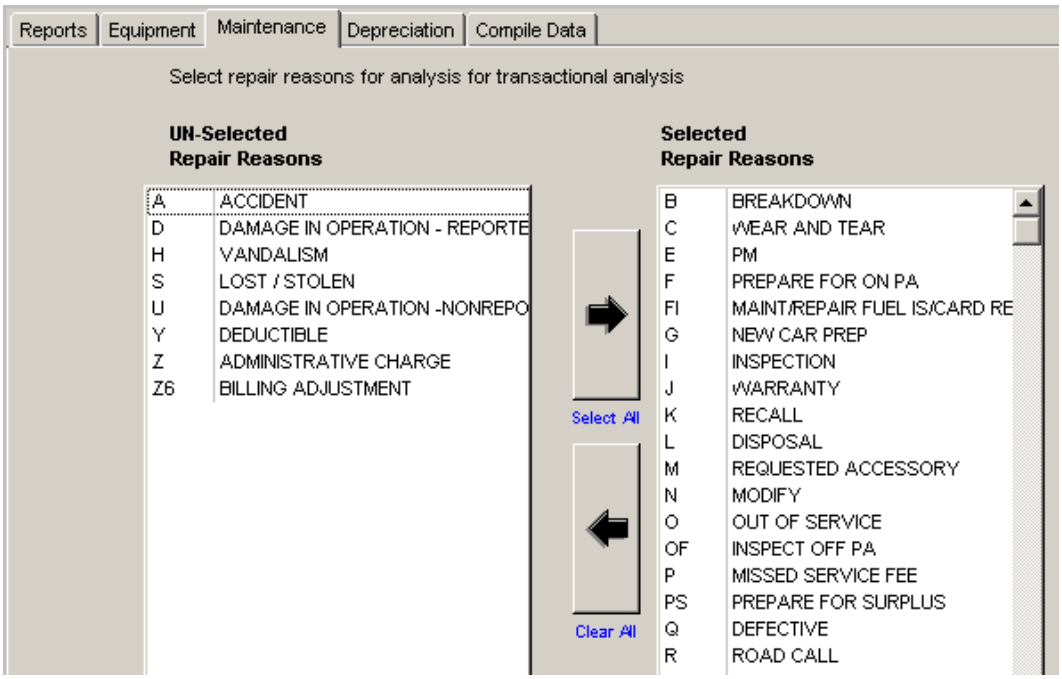

Depreciation Settings

Depreciation has many different options for complication into the replacement reporting.

1) The depreciation can be set to the same yearly declining balance for all equipment classes.

2) The year declining balance can be adjusted for individual years. For example: More or less depreciation can be taken in the first years then level off as the equipment gets older.

3) Depreciation can be set to a separate yearly declining balance for each equipment class. The selected classes are pulled and assigned the default depreciation based on the overall settings. Each class yearly percentage can be modified further. Each class can have a custom yearly depreciation schedule.

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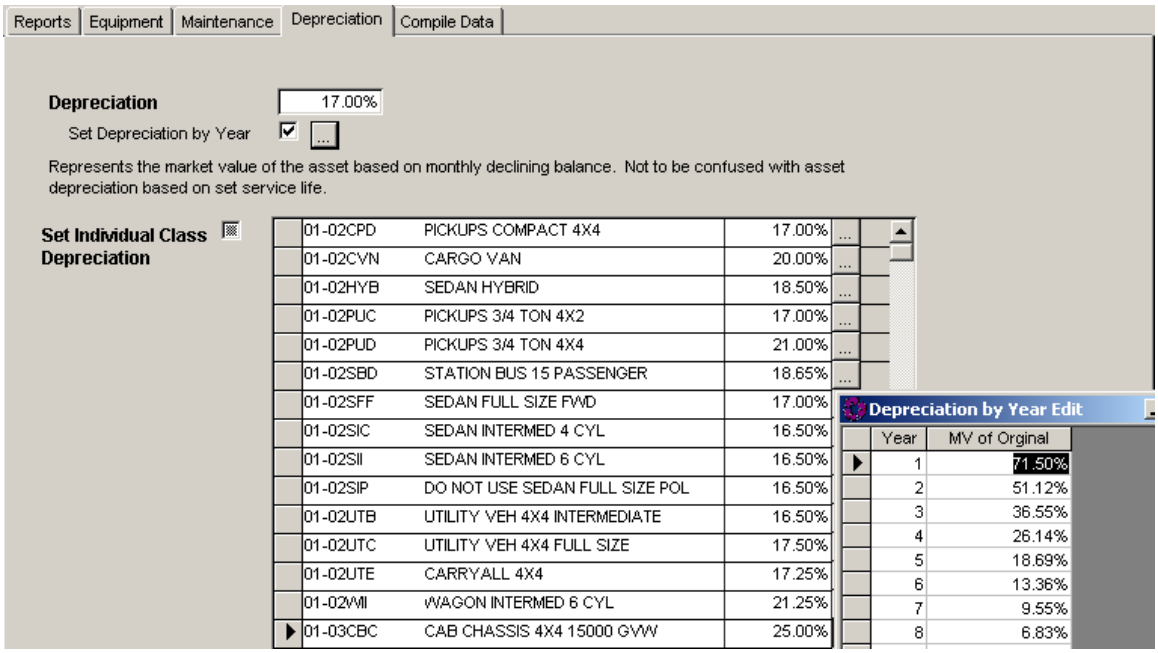
Replacement Analysis



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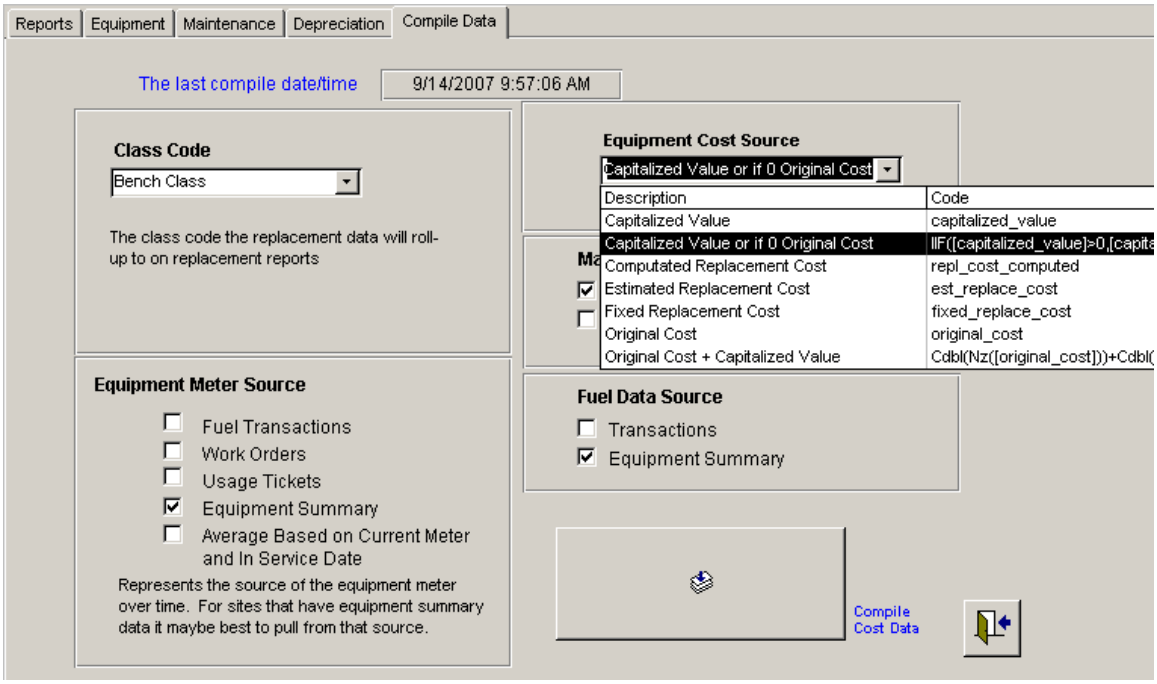
Replacement Analysis

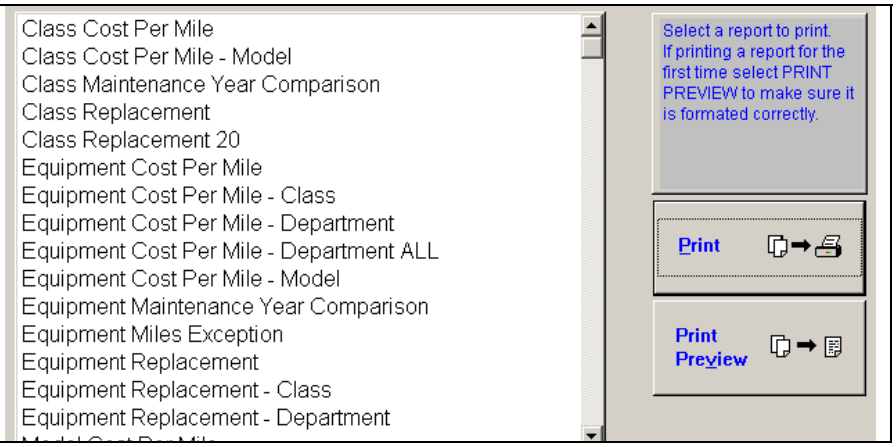
Maintenance & Meter Value Sources

Data maybe better represented using a source specific to your site. Flagship gives you the option to select the data sources that best fit your organization. This is the final step to preparing the Replacement Reporting module. Once these settings are set it is time to compile the data and review the charts and graphs.



Reports

The complete report listing with description follows this section.



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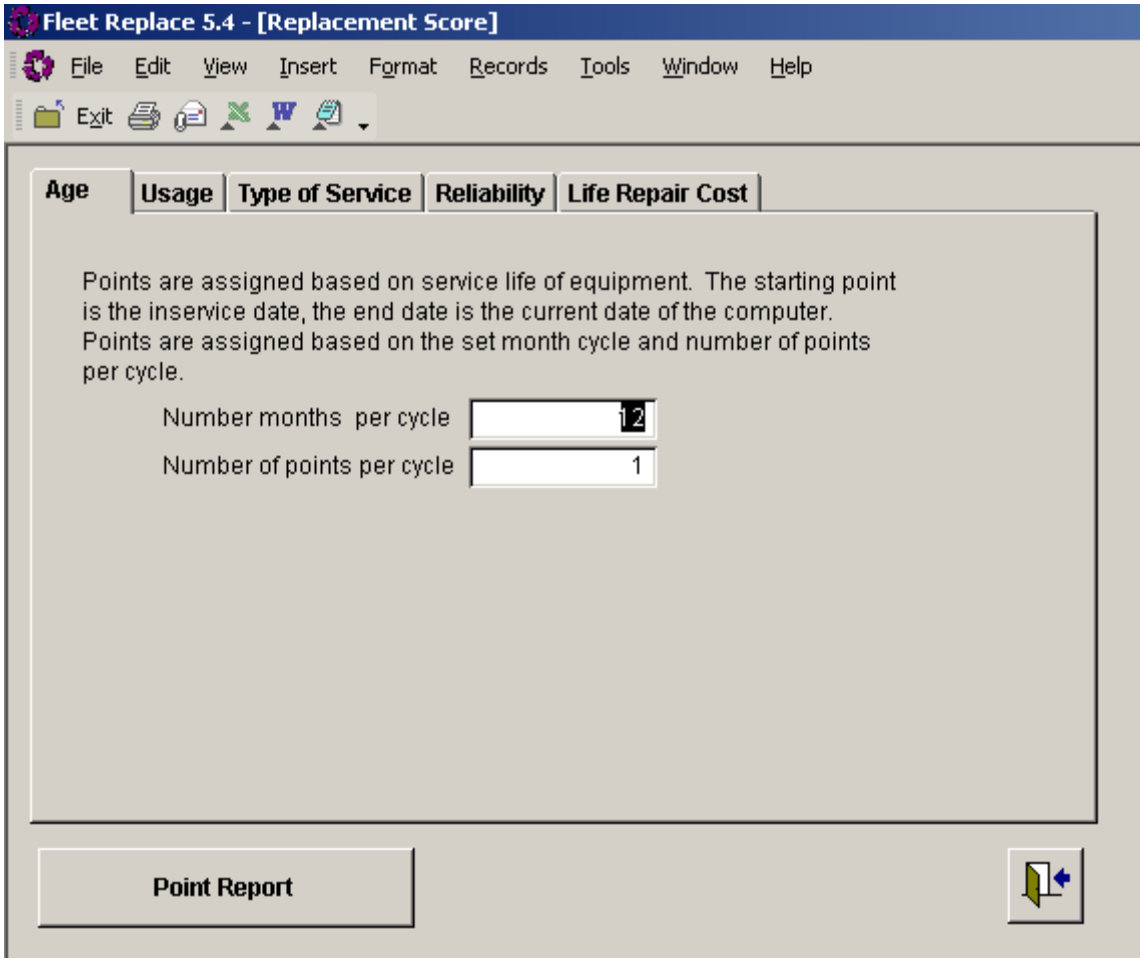
Replacement Scoring

The scoring method for replacement provides a more simplistic method for figuring when equipment should be replaced. This method ranks equipment from worst to best based on several factors. The higher the score to more likely the equipment is due for replacement.



Scoring Factors

Age	Points are added to an equipment unit based on the time period for the in-service date and current date/time on the computer. The interval and point assigned are set by the user.
Usage	Points are assigned based on the current meter of the equipment and the meter class assignment. The range and points assigned are set for each meter class.
Type of Service	Additional points are assigned based on the class and department the equipment unit is assigned too.
Reliability	Reliability compares repair cost in the third year of service with the last full

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949-388-0795

	year of service. The third year repair cost is divided by the last full service year to come up with this ratio.
Repair Cost	One to Six points are assigned based on the total life to date repair cost divided into the original purchase price of the equipment. Additional weight can be applied to this category by using the multiplier. -One (2) point if equipment life repair cost is between 0-20% of original cost. -Two (2) point if equipment life repair cost is between 20-40% of original cost. -Three (3) points if equipment life repair cost is between 40-60% of original cost. -Four (4) points if equipment life repair cost is greater then the original cost. -Five (5) points if equipment life repair cost is between 80-100% of original cost. -Six (6) points if equipment life repair cost is over 100% of original cost.

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