



# Remaining Useful Life

Understanding the significance of  
remaining useful life



# Why useful life matters

- The proper application of the Sales Comparison Approach and Cost Approach considers the analysis of useful life.
- The asset impairment process requires an analysis of remaining useful life.
- The Mark to Market accounting often requires analysis of remaining useful life.
- Insurance Loss & Purchase Price Allocation requires Age Life analysis



# What is useful life?

- Age Life has several forms:
- Normal Useful Life (NUL)
- Remaining Useful Life (RUL)
- Estimated Age (EA)
- Useful life varies by class of equipment,
- Examples from Construction, Milling, Packaging, Healthcare, Fabrication, Mining.



# Factors affecting useful life

- OEM's will almost never identify a useful life for any product.
- Remaining useful life of any product is a function of the following:
  - Quality of original manufacture.
  - Maintenance of equipment.
  - Age and hours of use of equipment.
  - Cost of rebuilding and restoring condition.



# Double Barrel Dryer/Drum





# Laser Cutter





# Wheel Loader





# Sources of useful life data

- ASA Estimated Useful Life (2010) schedule.
- IRS Publication F (1954)





# ASA Estimated NUL

American Society of Appraisers Machinery & Technical Specialties Committee Estimated Normal Useful Lives				
Industry Number	Industry Sector Name	Average of Life (Years)	Minimum Life (Years)	Maximum Life (Years)
1	Aerospace and Defense	13	11	14
2	Agricultural	14	13	15
3	Assembly and Manufacturing	11	10	12
4	Automobile Production	10	9	11
5	Banking and Financial Services	20	17	24
6	Chemical Process	14	13	15
7	Computer Equipment	4	4	5
8	Construction Equipment and Materials	12	11	14
9	Electrical and Steam Production and Distribution	29	26	31
10	Food, Beverage and Agricultural Processing	17	15	19
11	Furniture-Office/Other	13	12	14
12	Gaming and Entertainment	6	4	7
13	General Plant Equipment	14	12	15
14	Glass Manufacturing	18	16	19
15	High Tech Manufacturing	11	9	12
16	Hospitality, Food Service and Institutional	12	11	13
17	Iron and Steel Products	20	18	21
18	Laboratory, Service and Engineering	17	15	18
19	Leather Goods Production	16	14	17
20	Lithium Manufacturing	19	17	21
21	Marine	25	20	30
22	Material Handling Equipment	17	15	19
23	Medical and Health Sciences	10	9	11
24	Metal Working and Forming	18	17	20
25	Mining and Extractive Resources	20	18	22
26	Miscellaneous	25	23	28
27	Office Equipment	11	10	12
28	Oil and Gas Production and Distribution	23	21	25
29	Paint and Varnish Production	20	18	21
30	Photography	12	11	13
31	Plastics Products	13	12	14
32	Printing and Publishing	14	13	16
33	Railroad Equipment	24	22	28
34	Refrigeration	18	16	19
35	Rubber Production	15	13	16
36	Soap Manufacturing	17	15	18
37	Tankage	21	19	23
38	Telecommunications Equipment	11	10	13
39	Telecommunications-Mobiles	9	8	11
40	Telecommunications-Mobiles	11	9	14
41	Textile and Clothing Manufacturing	19	17	21
42	Trucks	8	7	9
43	Wastewater Treatment	20	18	22
44	Water Filtration Plant	20	18	22
45	Wood, Paper and Paper Products	18	16	20



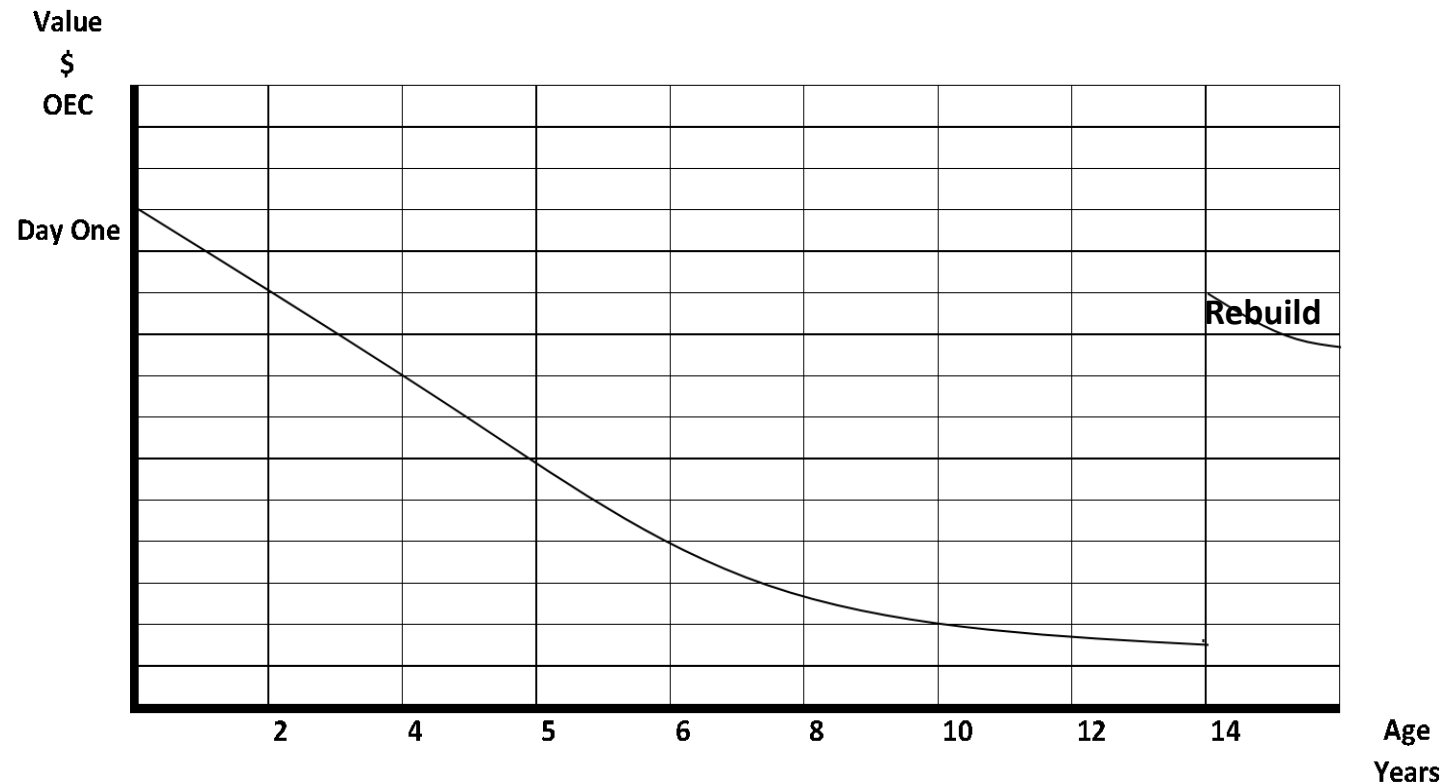
# The markets

- Equipment life cycle
- OEM sells new equipment to the end user in the market for new equipment
- The end user sells the used equipment to the secondary market which consists of end users auctioneers and dealers.
- At end of useful life equipment may be rebuilt to create a second useful life
- Once useful life is exhausted the equipment is sold to the scrap or salvage market.



# The value curve

- In the secondary market there is a value curve which tracks the value to end users and dealers.





# The value curve

- There may be more than one cycle for long lived equipment.
- Estimated Age (EA) vs Remaining Useful Life (RUL):  $NUL = EA + RUL$ .
- Use of market approach adjusting comparables



# Presenter

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