How to Calculate Multi Shift Depreciation of Assets in SAP?

Applies to:

Article applies to FICO functional consultants in SAP practice. For more information, visit the Operations homepage.

Summary

This article describes the configuration and front end procedures for calculating multi shift depreciation of assets in SAP.

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Author Bio

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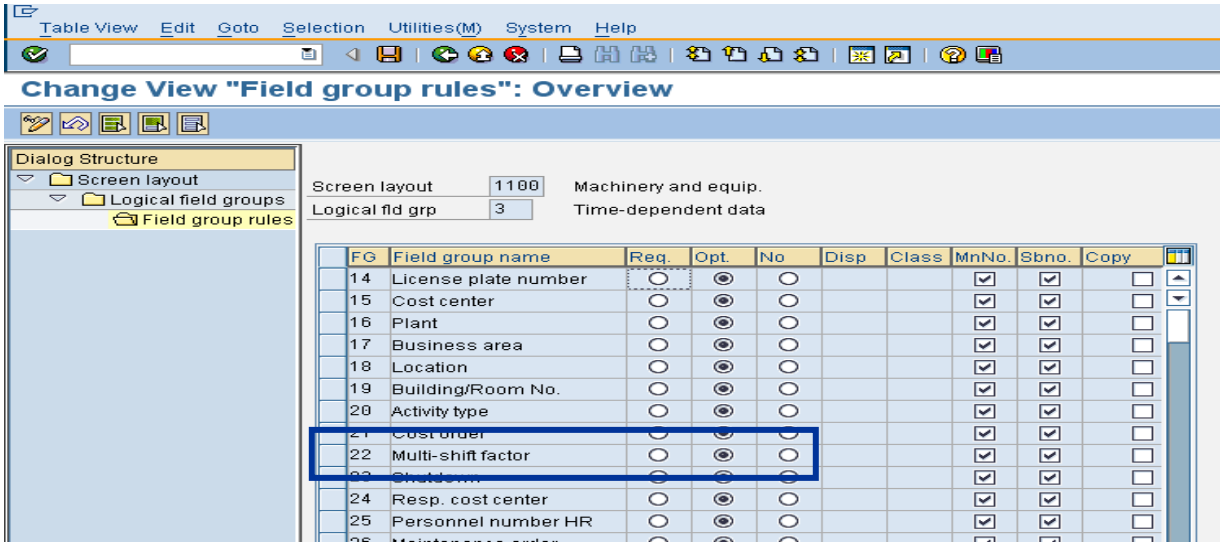
1. Configuration Steps:

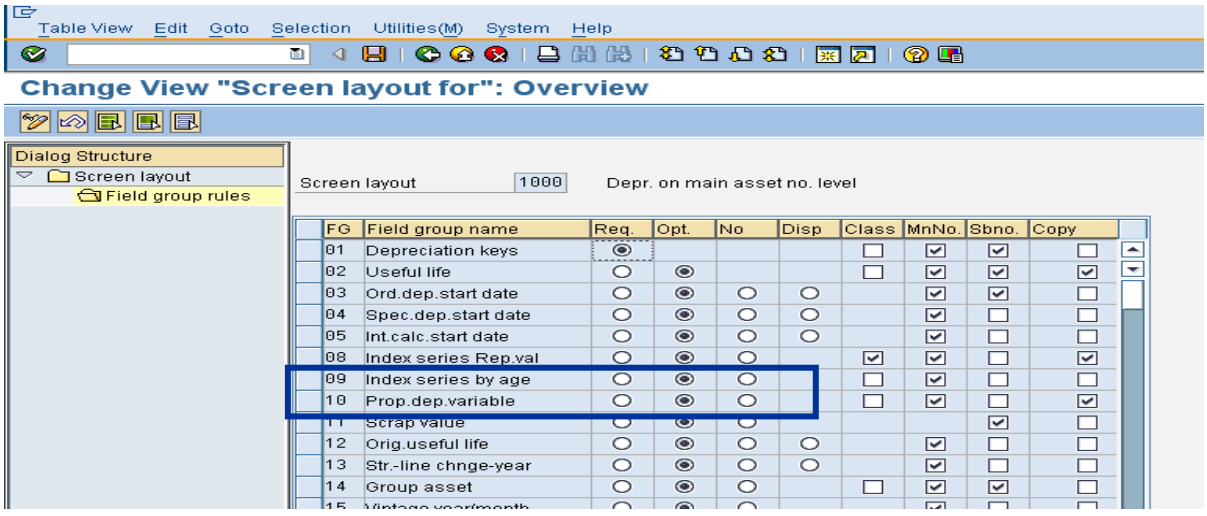
- Multi-shift factor to put it as optional in screen layout. Once it is optional, it will be shown in Time dependant tab in asset master transaction.

  Path: SPRO -> Financial Accounting -> Asset Accounting -> Master Data -> Screen Layout -> Define Screen Layout for Asset Master Data. Put Multi shift factor as "Optional"



- Variable portion of depreciation (Prop. dep. variable) to put it as optional in screen layout. Once it is optional, it will be shown in the depreciation terms in asset master transaction (double click the respective depreciation area and update the variable portion percentage)

  Path: SPRO -> Financial Accounting -> Asset Accounting -> Master Data -> Screen Layout -> Define Screen Layout for Asset Depreciation Areas. Put Prop dep. variable as "Optional"



2. Details required for calculating multi shit depreciation:

- Depreciation Rate / useful life - in customization / asset master transaction
- Shift Factor - in time dependant tab in asset master transaction
- Variable depreciation - in depreciation area in asset master transaction

3. Calculation of Variable portion:

Divide the single shift rate with the double shift rate, which is considered as the fixed portion for calculation purpose, then deduct the fixed portion percentage from 100% and the resultant percentage is considered as variable portion percentage.

Example: Single shift rate is 4.75% and double shift rate is 7.42%

Fixed portion calculation = 4.75/7.42 * 100 = 64.0162

Hence variable portion will be 100 – 64.0162 = 35.9838 (this needs to be updated in depreciation area in asset master transaction)

4. Formula for calculating multi shift depreciation:

For calculation purpose the shift factor for double shift is considered as the base and shift factor for single and triple shift is derived accordingly. Hence the shift factor base for double shift depreciation is 1 and for single and triple shift will be 0 and 2.

Depreciation key needs to be created only for double shift rate in customization and based on shift factor and variable depreciation portion, the depreciation rate for single and triple shift will be calculated accordingly.

Example: Calculation of depreciation for INR 10,000 based on straight line method for Plant and Machinery asset:

As per Part IV of Section 350 of the Companies Act, 1956 the rates of depreciation for plant and machinery (not being a ship) other than continuous process plant for which no special rate has been prescribed, the straight line rate would be single shift 4.75%, double shift 7.42% and triple shift 10.34%

Hence Single shift depreciation amount for INR 10,000 = INR 475.00
Hence Double shift depreciation amount for INR 10,000 = INR 742.00
Hence Triple shift depreciation amount for INR 10,000 = INR 1034.00

Single shift: Dep Rate 4.75% -- Fixed 64.0162% -- Variable 35.9838% -- Shift factor 0
Double shift: Dep Rate 7.42% -- Fixed 64.0162% -- Variable 35.9838% -- Shift factor 1
Triple shift: Dep Rate 10.35% -- Fixed 64.0162% -- Variable 35.9838% -- Shift factor 2.1**

**Here for Triple shift 2.1 is updated for shift factor in order to get nearer to 10.34% for INR 10,000.

Depreciation Percentage for double shift factor is 7.42% p.a. which should be considered as base.

Calculation:

- For single shift factor for asset value of INR 10,000: Fixed (10,000 * 7.42/100 * 64.0162/100) + variable (0 * 10,000 * 7.42/100 * 35.9838/100) = 475.00 + 0.00 = **INR 475.00**

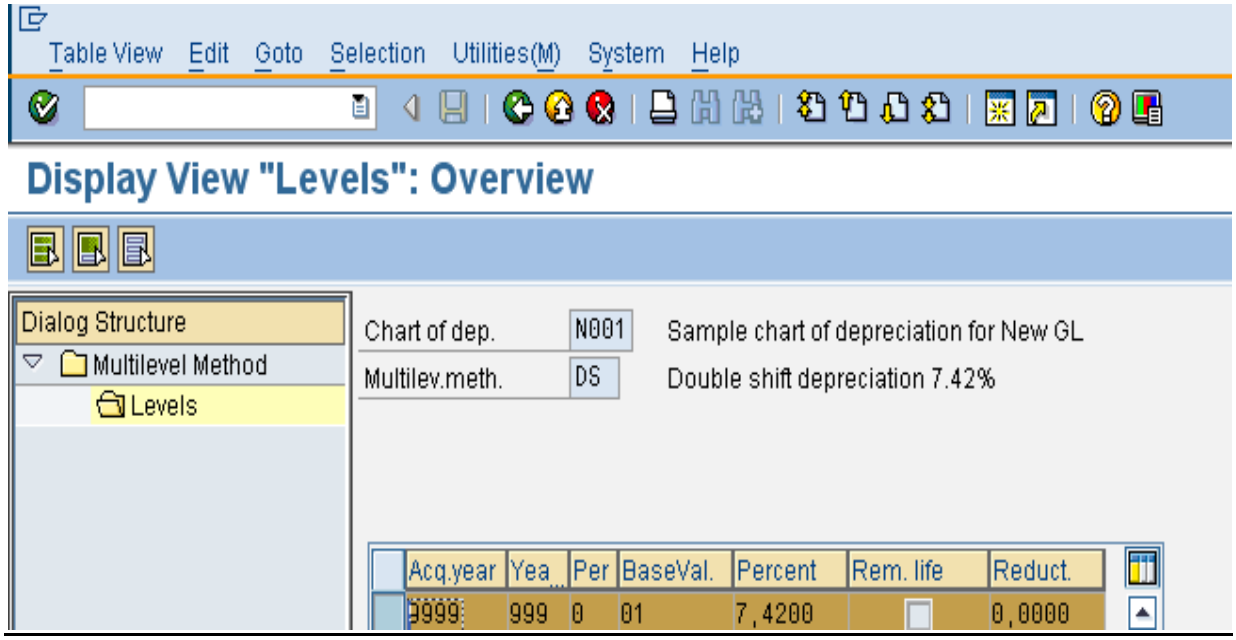
- For double shift factor for asset value of INR 10,000: Fixed (10,000 * 7.42/100 * 64.0162/100) + variable (1 * 10,000 * 7.42/100 * 35.9838/100) = 475.00 + 267.00 = **INR 742.00**

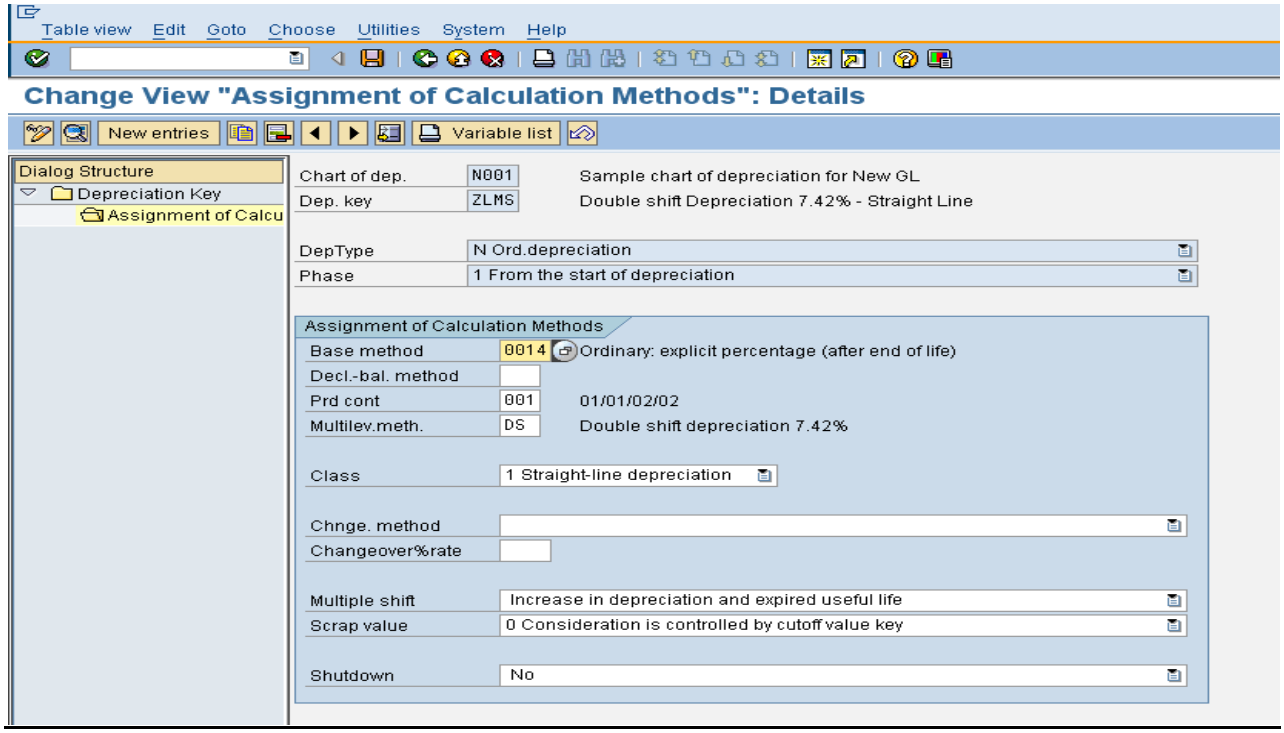
- For triple shift factor for asset value of INR 10,000: Fixed (10,000 * 7.42/100 * 64.0162/100) + variable (2.1 * 10,000 * 7.42/100 * 35.9838/100) = 475.00 + 560.69 = **INR 1,035.69**

Depreciation key customization:

Path: SPRO -> Financial Accounting -> Asset Accounting -> Depreciation -> Valuation Methods -> Depreciation Key -> Maintain Depreciation Key.

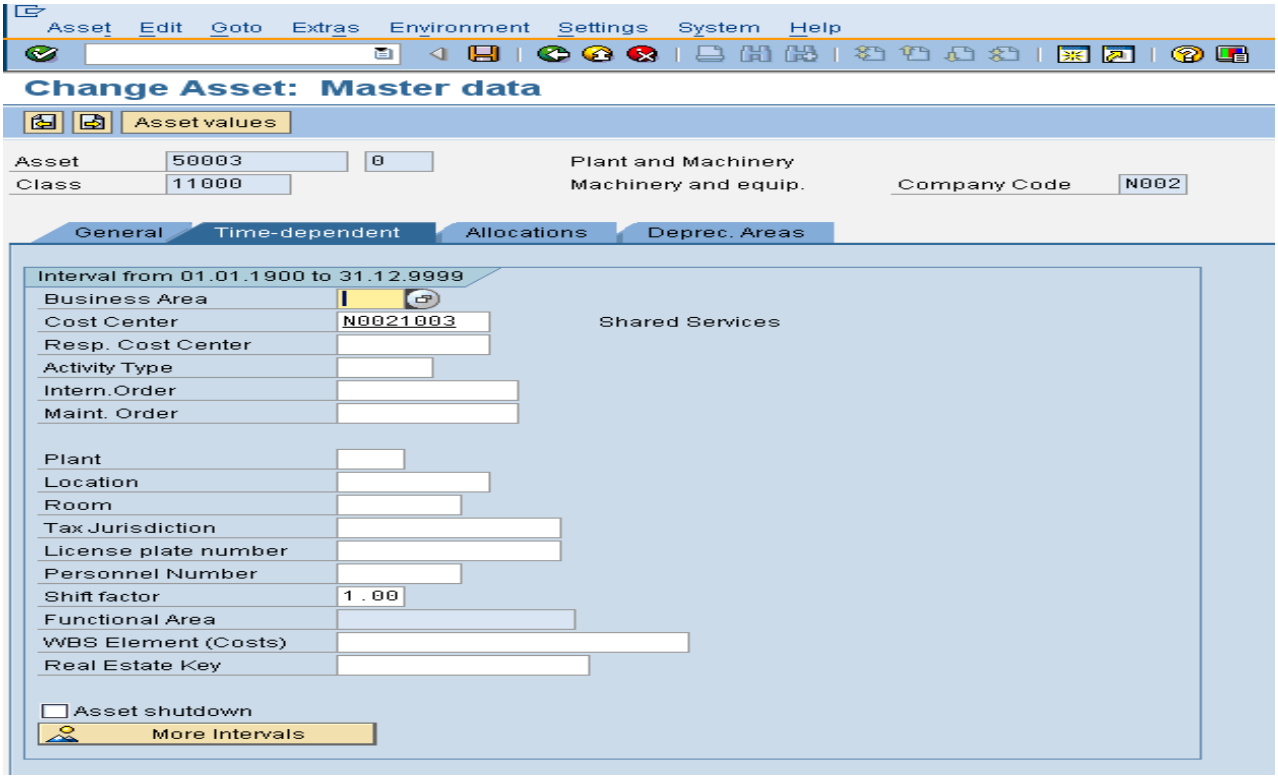
Put depreciation rate as 7.42% in multi level method and select base val. as either 01 or 24 depending on straight line or declining balance method. Create depreciation key with Depreciation type as Ordinary depreciation, Phase as from the start of depreciation and select suitable base method assignment, declining balance method assignment, period control assignment and multilevel method assignment. Select the class as either Straight line depreciation or Declining balance depreciation and ensure to select the Multi shift as "increase in depreciation and expired useful life".



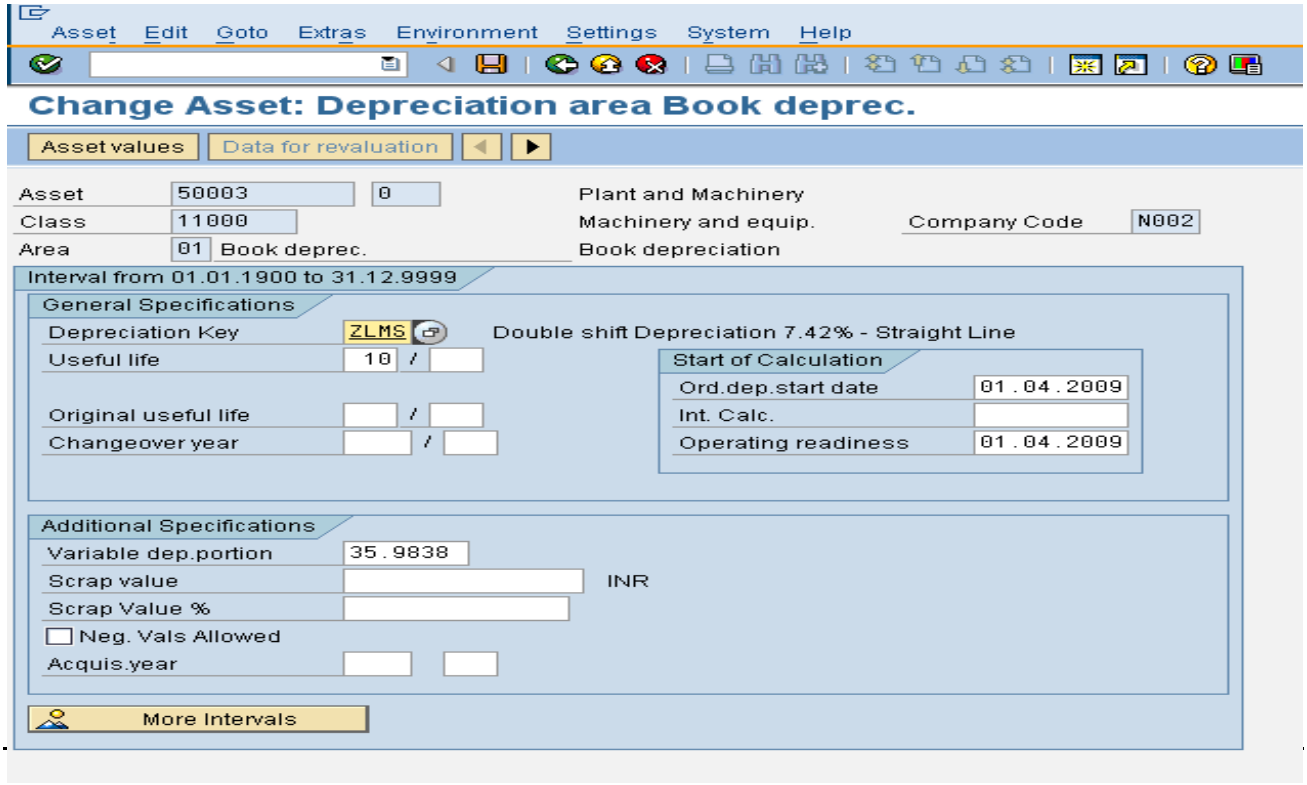


5. Front end Asset master updation:

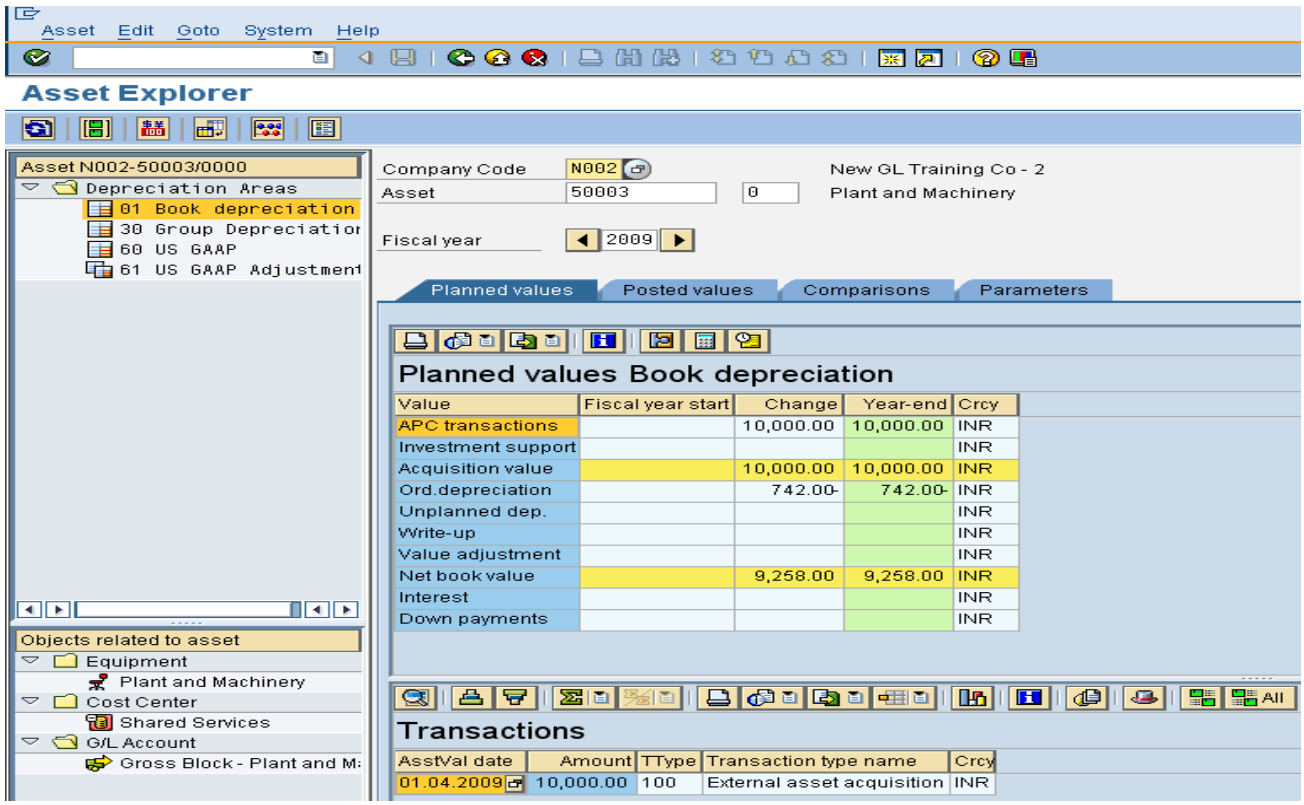
Enter the relevant shift factor in time dependant tab in asset master transaction:



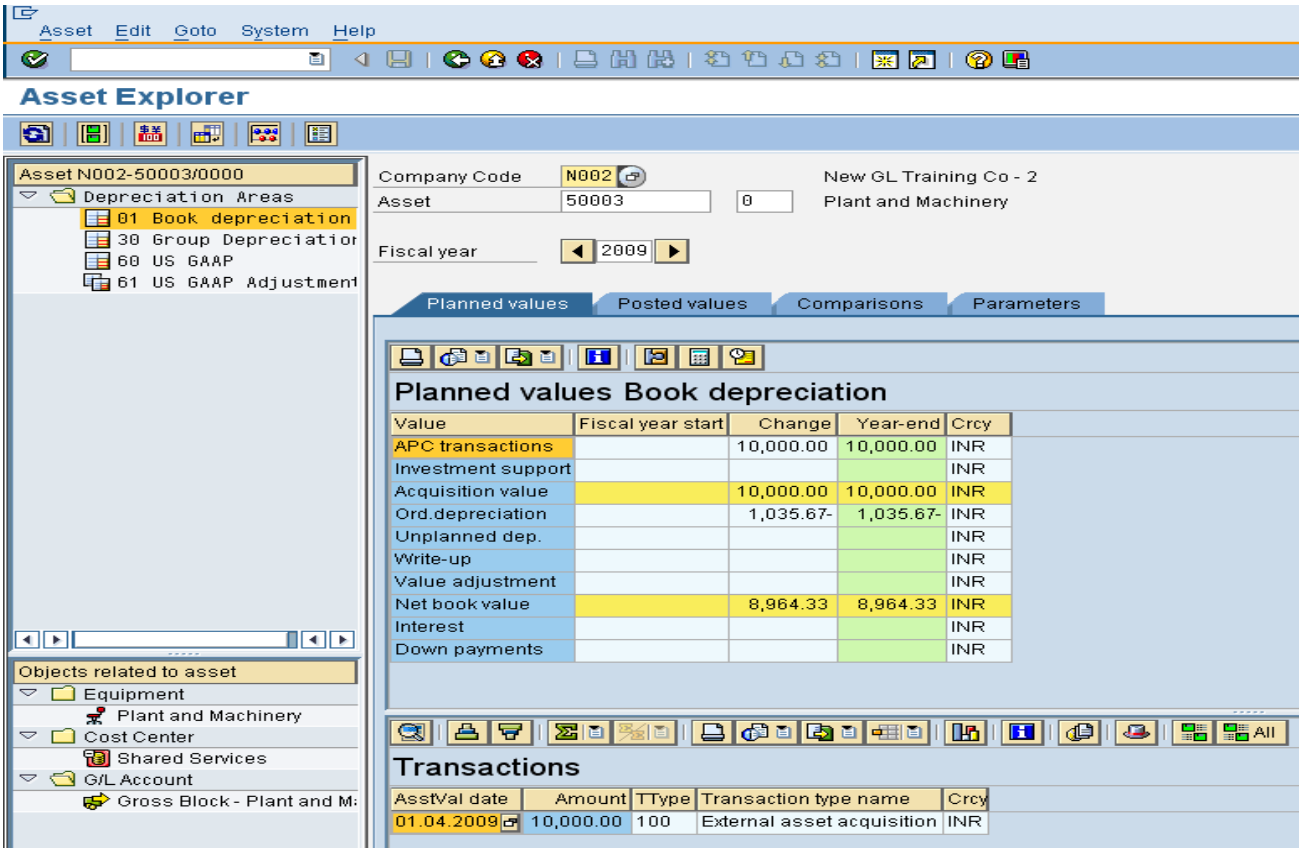
Enter the variable portion of depreciation in depreciation terms tab in asset master transaction (double click depreciation area and update the relevant variable portion percentage).



Example 1: AW01N transaction code: Double shift – Depreciation amount: INR 742.00



Example 2: AW01N transaction code: Triple shift – Depreciation amount: INR 1035.67



Same procedure and calculation can be followed for declining balance method based on the rates provided in Section 350 of Companies Act, 1956.

Related Content:

1. Depreciation rates: Explanatory memorandum – review of schedule XIV to the Companies Act, 1956 (www.mca.gov.in)
2. Help.sap.com (http://help.sap.com/saphelp_45b/helpdata/en/4f/71de62448011d189f00000e81ddfac/content.htm)
3. For more information, visit the Operations homepage.

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