

① MOV DL, 0Dh [BP+SI]

SS: 38E00h
 BP: 1BA4h
 SI: 05ADh
 disp: + 0Dh

 DL ← 3AF5Eh [aligned data transfer]

② MOV CX, 123Eh [Bx]

DS: 1A100h
 Bx: 089Bh
 displ: + 123Eh

 CX ← 1BBD9h (odd add)

It's a misaligned data transfer: since you are asking up to start from odd add/higher bank.

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③ MOV AX, ES: [BP][SI]011Ch

ES: 2 3 B₁₁ 0 0
 BP: 1 B₁₁ A₁₀ 4
 SI: 0 5 A₁₀ D₁₃
 disp: 0 1 1 C₁₂

AX ← 25D6 D_{odd} h misaligned data tx.

④ MOV [BX + DI], BX

DS: 1 A₁₀ 1 0 0 h
 BX: 0 8 9 B₁₁ h
 DI: + 0 9 E₁₄ F₁₅ h

1 B 3 8 A_{even} h → DX

aligned data transfer.

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e) $\text{MOV CX, SS:[BX] 10EFh}$

SS: 3 8 ¹⁰E ¹¹0 0 h

BX: 0 8 9 B h

displ: + 10 E ₁₄ F ₁₅ h

CL & 3 A 7 8 A h
even

aligned

CH & 3 A 7 8 B h
odd

f) $\text{MOV BX, 344Ah [SI]} \Rightarrow \text{DS}$

DS: 1 A ₁₀ 1 0 ¹¹0 h

SI: 0 5 A ₁₀ D ₁₃ h

displ: + 3 4 4 A ₁₀ h

BX & 1 D A F 7 h
odd/high

misaligned!

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⑨ mov dx, cs:[BP] 4Ah

CS: 48900h

BP: 1B, A, 4h

+ 4Ah

displ:

DL ← 4A4EEh (alligned)
even/lower

DH ← 4A4EFh
odd/higher.

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