Mnemonic	Bytes	Cycles	Description of Operation
LXI SP <B_2> <B_3>	3	3	$(SP)_L \leftarrow <B_2>$, $(SP)_H \leftarrow <B_3>$ Load byte two of the instruction into the lower order 8-bit of the stack pointer and byte three into the higher order 8-bit of the stack pointer.
PUSH PSW	1	3	[SP − 1] ← (A), [SP − 2] ← (F), (SP) = (SP) − 2 Save the contents of A and F (5-flags) into the pushdown stack addressed by the SP register. The content of SP is decremented by two. The flag word will appear as follows: D_0: CY_2 (Carry) D_1: 1 D_2: Parity (even) D_3: 0 D_4: CY_1 D_5: 0 D_6: Zero D_7: MSB (sign)
PUSH B	1	3	[SP − 1] ← (B) [SP − 2] ← (C), (SP) = (SP) − 2
PUSH D	1	3	[SP − 1] ← (D) [SP − 2] ← (E), (SP) = (SP) − 2
PUSH H	1	3	[SP − 1] ← (H) [SP − 2] ← (L), (SP) = (SP) − 2
POP PSW	1	3	(F) ← [SP], (A) ← [SP + 1], (SP) = (SP) + 2 Restore the last values in the pushdown stack addressed by SP into A and F. The content of SP is incremented by two.
POP B	1	3	(C) ← [SP], (B) ← [SP + 1], (SP) = (SP) + 2
POP D	1	3	(E) ← [SP], (D) ← [SP + 1], (SP) = (SP) + 2
POP H	1	3	(L) ← [SP], (H) ← [SP + 1], (SP) = (SP) + 2
STA <B_2> <B_3>	3	4	[<B_3> <B_2>] ← (A) Store the accumulator content into the memory location addressed by byte two and byte three of the instruction.
LDA <B_2> <B_3>	3	4	(A) ← [<B_3> <B_2>] Load the accumulator with the content of the memory location addressed by byte two and byte three of the instruction.
XCHG	1	1	(H) ⟷ (D) (E) ⟷ (L) Exchange the contents of registers H and L and registers D and E.
XTHL	1	5	(L) ⟷ [SP], (H) ⟷ [SP + 1] Exchange the contents of registers H, L and the last values in the pushdown stack addressed by registers SP. The SP register itself is not changed. (SP) = (SP)
SPHL	1	1	(SP) ← (H) (L) Transfer the contents of registers H and L into register SP.
PCHL	1	1	(PC) ← (H) (L) JUMP INDIRECT
DAD SP	1	3	(H) (L) ← (H) (L) + (SP) Add the content of register SP to the content of registers H and L and place the result into registers H and L. If the overflow is generated, the carry flip-flop is set; otherwise, the carry flip-flop is reset. The other condition flip-flops are not affected. This is useful for addressing data in the stack.
DAD B	1	3	(H) (L) ← (H) (L) + (B) (C)
DAD H	1	3	(H) (L) ← (H) (L) + (H) (L) (double precision shift left H and L)
DAD D	1	3	(H) (L) ← (H) (L) + (D) (E)
STAX B	1	2	[(B) (C)] ← (A) Store the accumulator content in the memory location addressed by the content of registers B and C.
STAX D	1	2	[(D) (E)] ← (A) Store the accumulator content into the memory location addressed by the content of register D and E.
LDAX B	1	2	(A) ← [(B) (C)] Load the accumulator with the content of the memory location addressed by the content of registers B and C.