

**ISOLATED PACK OPERATION  
DURING ENGINE START**

to improve cabin air quality between engine starts

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CAUTION: Moving engine BLEED air switches while a starter is engaged can damage the starter!

Engine No. 2 ..... START

After Engine No. 2 stabilized:

ISOLATION VALVE switch ..... CLOSE  
 Right PACK switch ..... AUTO  
 Duct Pressure ..... STABILIZED  
 Engine No. 1 ..... START

After Engine No. 1 stabilized:

ISOLATION VALVE switch ..... AUTO

**NO ENGINE BLEED  
TAKEOFF**

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Note: If anti-ice is required for taxi, configure for a „NO ENGINE BLEED TAKEOFF“ just prior takeoff. If anti-ice is not required for taxi, configure for a „NO ENGINE BLEED TAKEOFF“ just after engine start.

Right PACK switch ..... AUTO  
 ISOLATION VALVE switch ..... CLOSE  
 Left PACK switch ..... AUTO  
 Engine No. 1 BLEED air switch ..... OFF  
 APU BLEED air switch ..... ON  
 Engine No. 2 BLEED air switch ..... OFF  
 TRIM AIR switch (if fitted) ..... ON  
 WING ANTI-ICE switch ..... OFF

The WING ANTI-ICE switch must remain OFF until the engine BLEED air switches are repositioned to ON and the ISOLATION VALVE switch is repositioned to AUTO

**STARTING WITH GROUND AIR  
SOURCE  
(APU BLEED INOP)**

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Engine No. 1 must be started first.

When cleared to start:

APU BLEED air switch ..... OFF  
 Engine No. 1 start ..... ACCOMPLISH

WARNING: To minimize the hazard to ground staff, the external air should be disconnected and Engine No. 2 started using Engine Crossbleed Start procedure.

**NO ENGINE BLEED  
AFTER TAKEOFF**

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Note: If engine failure occurs, do not position the engine BLEED air switches ON until reaching 1500 ft or until obstacle clearance height has been attained.

Engine No. 2 BLEED air switch ..... ON  
 APU BLEED air switch ..... OFF

When Cabin rate of climb indicator stabilizes:

Engine No. 1 BLEED air switch ..... ON  
 ISOLATION VALVE switch ..... AUTO

If no longer required

APU ..... SHUT DOWN

**ENGINE CROSSBLEED START  
(APU BLEED INOP)**

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Prior to using this procedure, ensure that the area behind is clear.

Engine BLEED air switches ..... ON  
 APU BLEED air switch ..... OFF  
 PACK switches ..... OFF  
 ISOLATION VALVE switch ..... AUTO

Ensure bleed air supply for engine start.

Engine thrust lever (op. engine) ..... ADVANCE

Advance thrust lever until bleed duct pressure indicates 30 psi.

Non-op. Engine ..... START

After starter cutout, adjust thrust on both engines, as required.

**NO ENGINE BLEED  
LANDING**

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If additional go-around thrust is desired, configure for a „NO ENGINE BLEED LANDING“.

When below 10.000 ft:

APU ..... START  
 WING ANTI-ICE switch ..... OFF  
 Right PACK switch ..... AUTO  
 ISOLATION VALVE switch ..... CLOSE  
 Left PACK switch ..... AUTO  
 Engine No. 1 BLEED air switch ..... OFF  
 APU BLEED air switch ..... ON  
 ENGINE No. 2 BLEED air switch ..... OFF