

COBRA

UNIVERSAL ENGINE CHANGE SYSTEM FOR NARROW AND WIDE-BODY AIRCRAFT



Engine change on a B777 GE90

THE COBRA SYSTEM

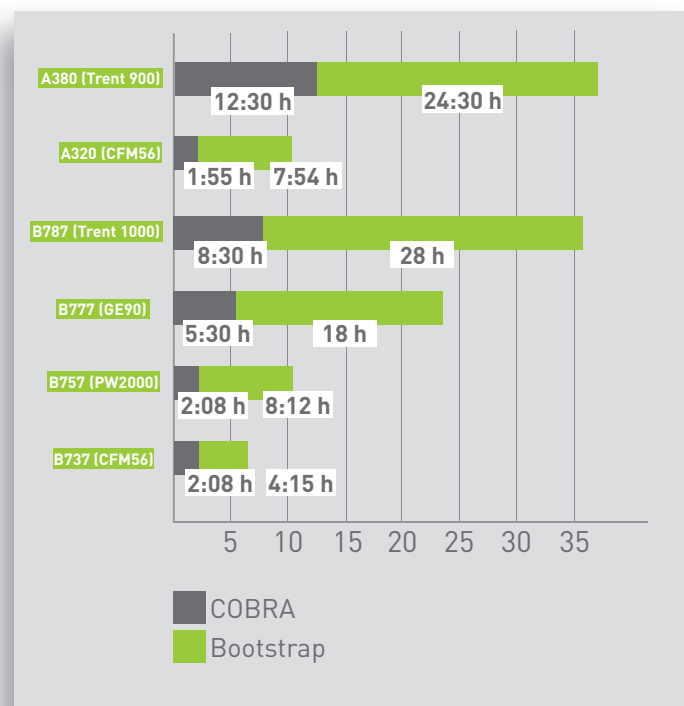
The engine is the heart of each aircraft and has to be maintained and overhauled strictly. Our COBRA engine change system is the economic, safe and highly efficient system solution for your engine maintenance. It is compatible with all of today's commercial and military aircraft.

COBRA has been designed to ensure a fast engine change and to minimize operational failure and technical risks. This offers tremendous benefits by reducing costs through minimal aircraft downtimes.

CHARACTERISTICS

- Universal, innovative engine change system for wing-mounted engines
- Interchangeable adapters for flexible and universal handling of engine dollies, cradles and engine transportation stands
- Semi-automatic lifting of engine, dolly and cradle or transportation stand
- Primary and interchangeable secondary unit connected with a cable
- 4 pillars; each pillar can be controlled independently via a mobile panel
- Movement in 3 axis
- Suitable for a wide range of aircraft
- Airbus and Boeing approved

ENGINE CHANGE RECORDS



BENEFITS

+ Universal Application

- Multi-purpose application unit
- Interchangeable adapters for flexible and universal handling of engine dollies, cradles and shipping stands

+ Improved efficiency

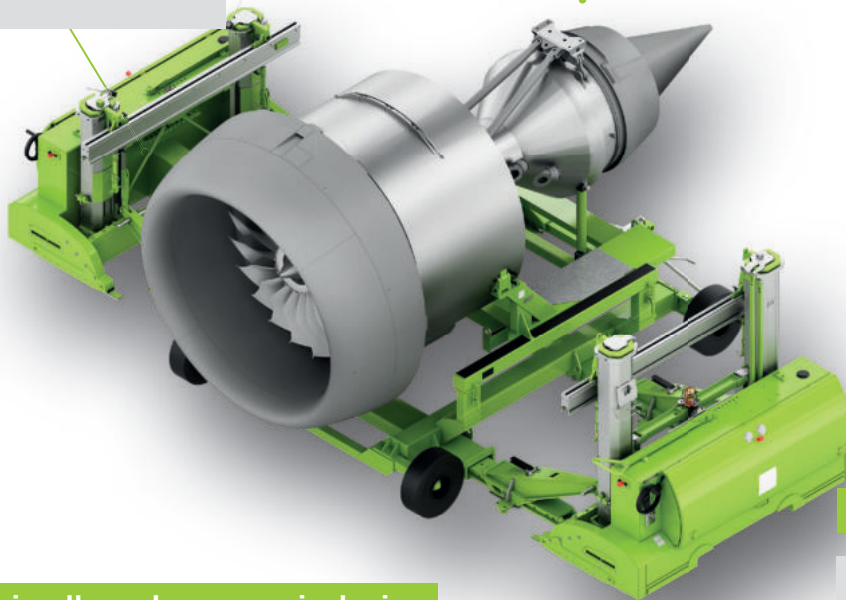
- Up to 70% time saving for engine changes (compared to bootstrap)
- Reduced aircraft downtimes result in lower maintenance costs and enhanced fleet availability
- Fast and easy interchangeability of adapters for flexible and universal handling

+ Operational safety

- Protects the aircraft, engine and operator with various safety features e.g. inclination sensors
- Engine is protected during the whole engine change process via lowering safety features and automatic pressure control (ETC)
- OEM approved
- During wind, lateral load or uncontrolled wing movements, the pillars retract to a level at which the total allowable load on the pylon is not exceeded
- Lowering safety feature: During the de-installation process, this feature prevents excessive load decrease during disconnection of the engine from the pylon

+ Outstanding accuracy

- Semi-automatic lifting of engine and dolly
- Three axes positioning of your engine



+ Low cost of ownership

- Short amortization period on investment costs. One COBRA fits for a wide range of aircraft
- Fewer personnel required: One expert operator can lift the engine in comparison by using a bootstrap, four operators are required to operate the chain hoist
- Lower investment costs: One COBRA fits for a wide range of aircraft.

+ User friendly and ergonomic design

- Easy operation via mobile panel that controls the entire lifting and lowering of the engine
- No manual men power required
- Reduced physical stress
- No heavy lifting required

Time savings:

70%

with our COBRA engine change system compared to bootstrapping

Trent 1000 engine change:

9h

for complete engine change with our COBRA engine change system

More than

80

COBRA engine change units sold

More than

38

COBRA customers worldwide

AVAILABLE ACCESSORIES

COBRA is an extremely powerful and flexible system. With just one COBRA you can maintain almost all types of aircraft and engine combinations.

Standard accessories:

Flexible and interchangeable adapter concept for most common narrow-body and wide-body aircraft fleet; typical set-up example includes: 2 lifting beams and 4 lifting adapters.

Optional accessories:

- Load cell calibration kit
- Laser module
- Transportation trailer
- Data logger
- Inclination sensor
- Removal and installation tool for COBRA adapters
- GE90 / Trent 1000 airbag tool
- Storage cover

Engine change on a B777F
GE90-110

<https://youtu.be/cAJBYMVtW0I>



Engine change on an A380 T 900

AIRCRAFT APPLICATION

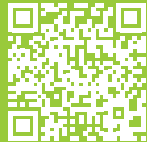
Manufacturer	A/C Type	Engine Type
Airbus	A220	PW1500G
	A320	CFM56-5
		LEAP-1A
		PW1100G
	A330	V2500
		CF6-80
PW4000		
A340	Trent 700	
	Trent 7000	
A350	CFM56-5	
A380	Trent 500	
	Trent XWB	
	GP7200	
	Trent 900	

Manufacturer	A/C Type	Engine Type
Boeing	B737	CFM56 -3/ -7
		LEAP-1B
	B747	GE90
		CF6-80
	B757	PW2000
		RB211
	B767	CF6-80
		PW4000
	B777	GE90
		PW4000
B787	Trent 800	
	GE90	
	Trent 1000	

*further application upon request

Engine change on an A220
PW1500

<https://youtu.be/04Z0NPGkN40>



Engine change on a B787
Trent 1000

ANA Airways, Haneda
International Airport, Japan

<https://youtu.be/GmYk6nYZpgU>



Engine Change on an A220 (former C-series) PW1500



WORLDWIDE FOOTPRINT



SALES REPRESENTATIVE



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In safe hands.