

# Thrust Reverser Actuation System and Components

### **Overview**

The Thrust Reverser Actuation System consists of several independent components that control the deployment of the aircraft thrust reversers to systematically assist the aircraft to reduce speed safely upon landing.

Components include hydraulic actuators (locking and non-locking), isolation valves, directional control valves, door corner locking mechanisms, and mechanism hydraulic actuation/controls.

### **Design Characteristics:**

- 3,000 psig operating pressure
- Electrical lock indication
- High side load tolerance
- Individual locking components or integral with actuators

### **Key System Components:**

- Hydraulic Control Valve
- Link Locks
- Isolation Valve
- Hydraulic Lock System Actuators
- Thrust Reverser Actuators

### **Operational Characteristics:**

Isolate, lock, deploy, and stow thrust reversers

### Platforms

A320	A330	A340
V2500	717	G-IV
Falcon 10	Fokker 70	MD80 SERIES



Link Lock Assembly



Hydraulic Control Valve



Hydraulic Control Unit



Thrust Reverser Actuator

Hydraulic Lock System Actuator

Thrust Reverser Actuator

## Who Is Arkwin?

Arkwin Industries is the technical expert in all things hydraulic for aerospace and defense. We design, test, manufacture, and support precision hydraulic and fuel system components for civil and military fixed-wing aircraft, helicopters, spacecraft, turbine engines, and other special applications.

Our reputation for quality and reliability, as well as our location, allow us to attract some of the best engineering, technical, and manufacturing talent available.

## **Thrust Reverser Valves**

Model #	End Usage	Description	Features	Product Image
0711480	A340 TR Isolation Valve	3W-2P solenoid pilot operated isolation valve	Fire resistant	
0711504	717 TR Hydraulic Control Module	<ul> <li>3W-2P Isolation solenoid pilot operated valve</li> <li>4W-2P solenoid pilot operated DCV</li> </ul>	<ul> <li>Rip-stop construction</li> <li>Dual coil solenoids</li> <li>Pressure switch</li> <li>Manual over-ride</li> </ul>	
0711526	717 TR Lock Link Control Valve	<ul> <li>3W-2P solenoid pilot operated DCV</li> </ul>	Metered flow rate	-
0711346	MD80 TR Control Valve	<ul> <li>Solenoid pilot operated 4W-2P DCV</li> </ul>	Solenoid plus     manual operation	

## **Thrust Reverser Actuators and Components**

Model #	End Usage	Description	Features	Product Image
1211164	Falcon 10 TR Actuator	<ul> <li>Unbalanced linear actuator</li> <li>Spherical bearing mount</li> </ul>	<ul> <li>Extend position lock</li> <li>Lock Switch</li> </ul>	Contraction of the second
1211534	717 TR Actuator	<ul> <li>Unbalanced linear actuator</li> <li>Flange mount</li> </ul>	<ul> <li>Piston anti- rotation guide rod for torque reaction</li> <li>Hydraulic snubbing</li> </ul>	
1211530	717 TR Actuator	<ul> <li>Single acting actuator (retract)</li> <li>Side flange mount</li> </ul>	<ul> <li>Spring return</li> <li>External spring capsule for driving door locks</li> </ul>	
2111012 and 2111013	717 TR Lock-Link	Door corner locking mechanism	Proximity switch	

## **Key Features**

• Rip stop construction

Solenoid or mechanical operation

• Fire proof designs



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