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

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

<table>
<thead>
<tr>
<th>Model #</th>
<th>End Usage</th>
<th>Description</th>
<th>Features</th>
<th>Product Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>0711480</td>
<td>A340 TR Isolation Valve</td>
<td>• 3W-2P solenoid pilot operated isolation valve</td>
<td>• Fire resistant</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
</tbody>
</table>
| 0711504  | 717 TR Hydraulic Control Module | • 3W-2P Isolation solenoid pilot operated valve  
• 4W-2P solenoid pilot operated DCV | • Rip-stop construction  
• Dual coil solenoids  
• Pressure switch  
• Manual over-ride | ![Image](image2.png) |
| 0711526  | 717 TR Lock Link Control Valve   | • 3W-2P solenoid pilot operated DCV | • Metered flow rate | ![Image](image3.png) |
| 0711346  | MD80 TR Control Valve            | • Solenoid pilot operated 4W-2P DCV | • Solenoid plus manual operation | ![Image](image4.png) |

## Thrust Reverser Actuators and Components

<table>
<thead>
<tr>
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</table>
| 1211164  | Falcon 10 TR Actuator            | • Unbalanced linear actuator  
• Spherical bearing mount | • Extend position lock  
• Lock Switch | ![Image](image5.png) |
| 1211534  | 717 TR Actuator                  | • Unbalanced linear actuator  
• Flange mount | • Piston anti-rotation guide rod for torque reaction  
• Hydraulic snubbing | ![Image](image6.png) |
| 1211530  | 717 TR Actuator                  | • Single acting actuator (retract)  
• Side flange mount | • Spring return  
• External spring capsule for driving door locks | ![Image](image7.png) |
| 2111012 and 2111013 | 717 TR Lock-Link | • Door corner locking mechanism | • Proximity switch | ![Image](image8.png) |

### Key Features

- Rip stop construction
- Fire proof designs
- Solenoid or mechanical operation