

# INSTRUCTION SHEET

## FA2A WINCH CONTROL VALVE

### RETROFIT INSTRUCTIONS

Form MHD56137

This instruction sheet describes the steps necessary to install a replacement control assembly on an FA2A winch. The old control valve which is mounted on the cover is replaced. The replacement control valve is mounted to the inlet port of the motor housing.

#### Removing Old Control Valve



- Never perform maintenance on the winch while it is supporting a load.
- Before performing maintenance, tag controls:  
**DANGER - DO NOT OPERATE -  
EQUIPMENT BEING REPAIRED**
- Turn off air system and depressurize air line before performing any maintenance.

Refer to Dwg. MHP1320

1. Disconnect main air supply line at the winch.
2. Disconnect disc brake air line from elbow fitting located on the underside of the motor housing. Install fitting (616) to cap elbow fitting (617).
3. Remove capscrews (233) from inlet manifold (238). Lift off inlet manifold and gasket (239).
4. If setscrew (245) is visible through slot in sleeve (240), use a 5/64 in. Allen wrench and loosen. Ensure that setscrew remains below the surface of spool (242). If setscrew is not visible then remove capscrew (231) and gasket (232) in cover (228). Insert a 1/8 in. Allen wrench through hole and into screw in pilot valve. Rotate assembly until setscrew is facing up and visible through the spool. Loosen the setscrew.
5. Remove six capscrews (229) securing the motor cover (228) to the motor housing. Pull motor cover straight back away from the motor housing.
6. Support motor housing (224) and remove four capscrews (223) securing the motor housing to motor adapter (71). Lift motor assembly away from motor adapter.
7. Discard 'O' ring (203) between motor housing and motor adapter (71).
8. Remove tube fitting (237) next to sleeve (240) in motor housing. Install setscrew (618) with Loctite® 242 to plug this hole. Cut wire tie (262) securing tubing (280) to motor housing. Remove tube fitting (237) on motor cover side and install setscrew (618) with Loctite® 242 to plug this hole. Discard tube and tube fittings.
9. Remove spool (242) from sleeve (240) in motor housing. Spool can only be removed from the motor adapter side.

#### Installing New Control Valve

Refer to Dwg. MHP1289

1. Ensure four 'O' rings (614) are installed on new spool (613). Lightly lubricate 'O' rings and spool, slide new spool into sleeve (240) in motor housing until flush with housing.
2. Support motor with a suitable hoist and mount motor housing to motor adapter. Rotate housing slightly to engage splines on shaft. With air inlet port facing up align capscrew holes. Insert four capscrew (223) through motor flange into adapter and tighten.
3. Verify spool locating pin (611) is straight and has not been damaged during shipment. Position gasket (612) and manifold/cover assembly (607 and 608) onto motor housing. Manifold and cover are bonded together and thermoplastic coated at the factory. Install four capscrews (606) through manifold/cover and into motor housing. Torque to 108-112 in lb. (12-13 Nm).
4. Mount control valve assembly (300) and gasket (248) to cover such that the control handle is toward the winch drum. Install four capscrews (331) and torque to 33-36 ft lb. (45-49 Nm).
5. Apply a 1/16 in (2 mm) bead of Loctite® 515 around motor cover (615). Install cover on motor housing. Secure with six capscrews (229).
6. Connect brake line to elbow fitting (313) on control valve housing.
7. Connect air supply line to control valve.
8. Turn on air supply and check for leaks.
9. Operate winch slowly in both directions to ensure smooth operation.

Form MHD56137

Edition 1

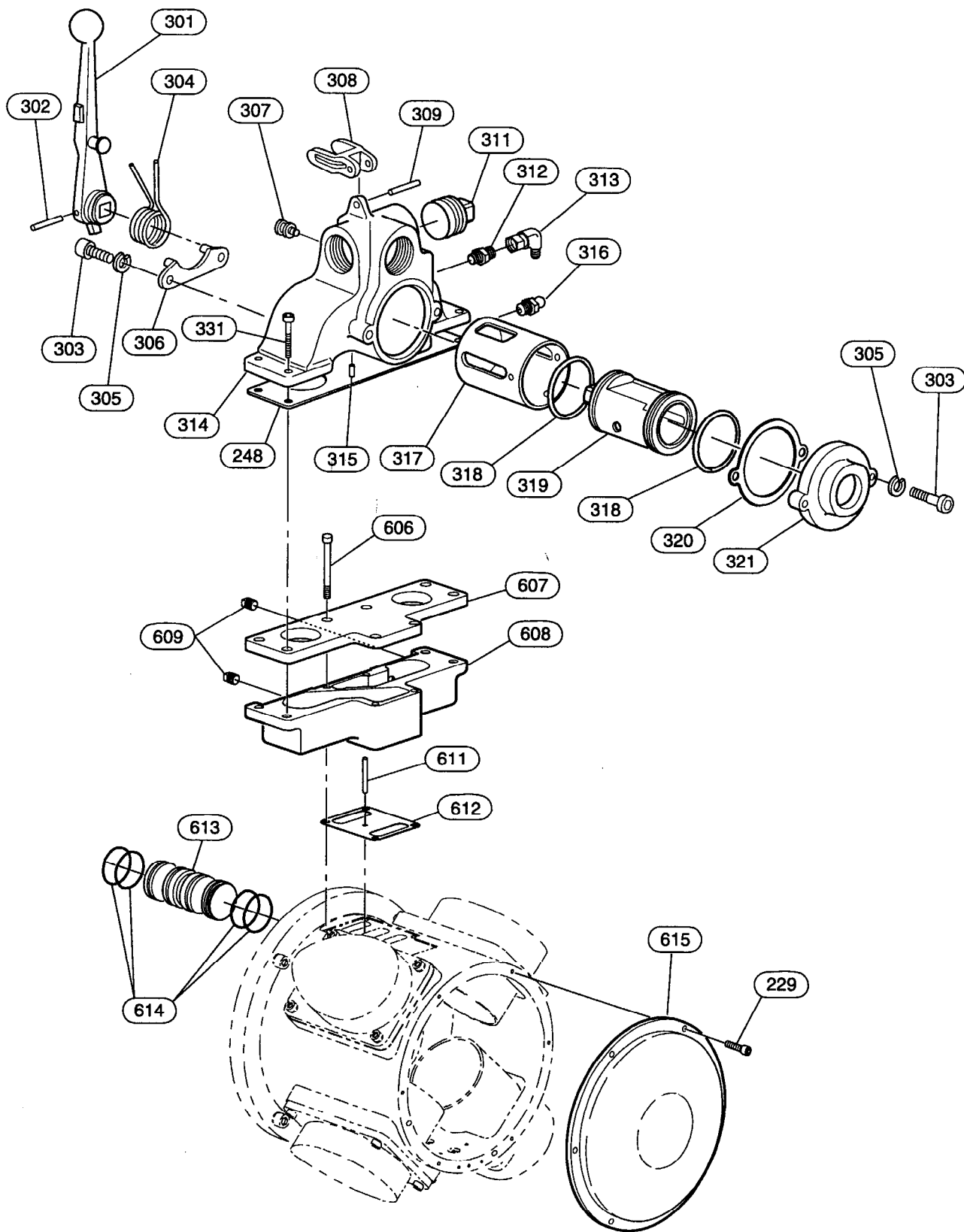
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**INGERSOLL-RAND**  
**MATERIAL HANDLING**

# CONTROL VALVE ASSEMBLY DRAWING FOR INSTALLATION



(Dwg. MHP1289)

## CONTROL VALVE PARTS LIST FOR INSTALLATION

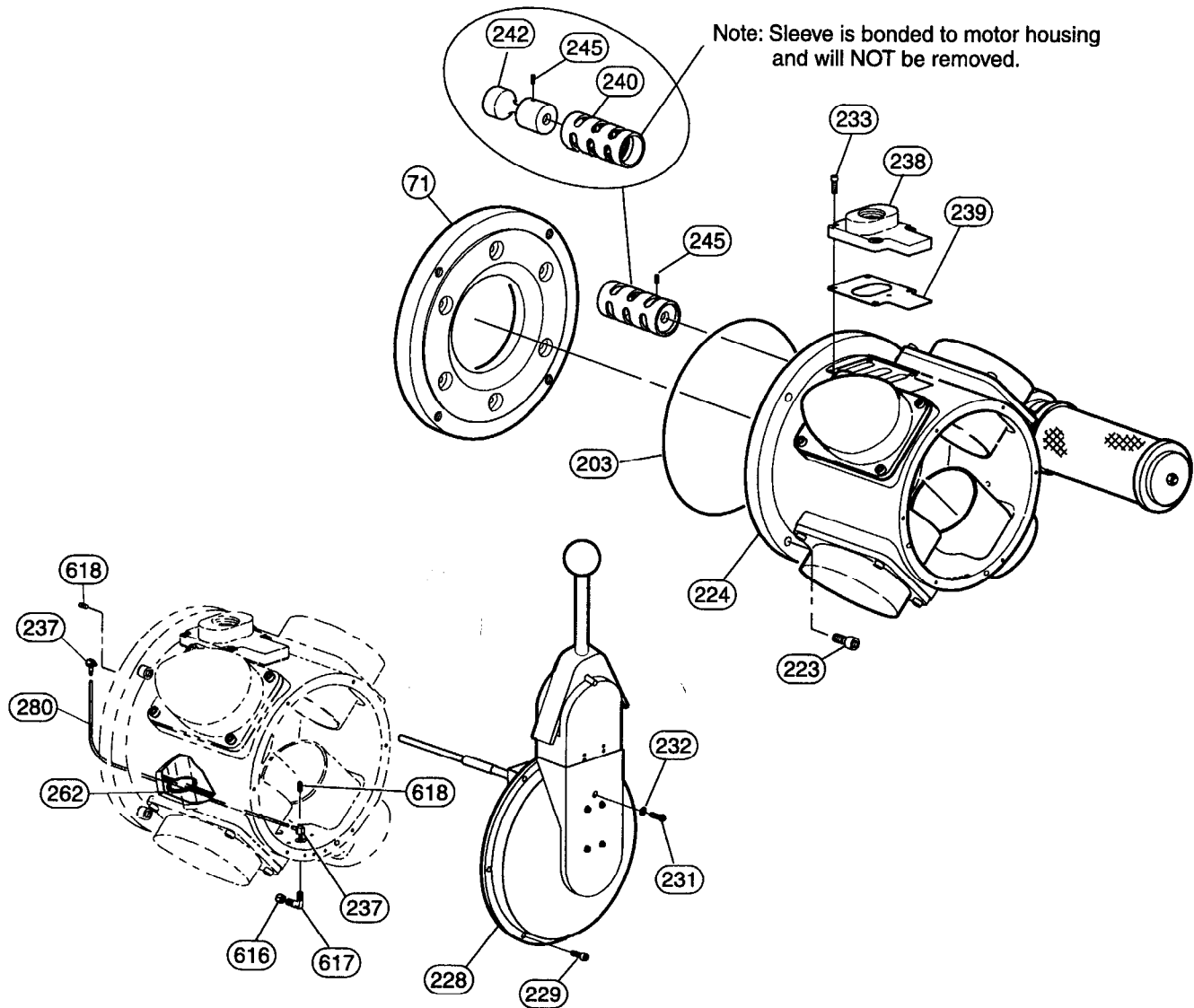
| ITEM NO. | DESCRIPTION OF PART                                    | QTY TOTAL | PART NUMBER | ITEM NO. | DESCRIPTION OF PART | QTY TOTAL | PART NUMBER |
|----------|--|-----------|-------------|----------|---------------------|-----------|-------------|
| ---      | Control Valve Kit *                                    | 1         | 26192       | 315      | Pin                 | 1         | 71326102    |
| 229      | Capscrew   | 6         | 71307292    | 316      | Grease Fitting      | 1         | 53095       |
| • 248    | Gasket   | 1         | K5B-547     | 317      | Valve Bushing       | 1         | †           |
| 300      | Control Valve Assy. (incl's items 301-311 and 314-321) | 1         | 26126       | • 318    | Seal Ring           | 2         | K5B-606     |
| 301      | Handle   | 1         | K5B-556P    | 319      | Valve Body          | 1         | 26125       |
| 302      | Roll Pin   | 1         | K5B-1115    | • 320    | Gasket              | 1         | K5B-275     |
| 303      | Capscrew   | 4         | 71292064    | 321      | Exhaust Flange      | 1         | KK5B-276SP  |
| • 304    | Spring   | 1         | K5B-412     | 331      | Capscrews           | 4         | 71325039    |
| 305      | Lockwasher   | 4         | 51581       | 606      | Capscrew            | 4         | 71326441    |
| 306      | Retainer   | 1         | K5B-1110AP  | 607      | Cover               | 1         | 26130       |
| 307      | Spring Retaining Stud                                  | 1         | K5B-553     | 608      | Manifold            | 1         | 26128       |
| 308      | Latch  | 1         | K5B-869AP   | 609      | Fitting, Pipe       | 2         | 54246       |
| 309      | Roll Pin   | 1         | HLK-20      | 611      | Pin                 | 1         | 71326508    |
| 311      | Pipe Plug  | 1         | 71263297    | • 612    | Gasket              | 1         | 26129       |
| 312      | Fitting, Connector                                     | 1         | 511814      | 613      | Spool               | 1         | 26131-1     |
| 313      | Fitting, Swivel  | 1         | 71328561    | 614      | 'O' Ring            | 4         | 71328090    |
| 314      | Valve Housing (Incl's items 315 and 317)               | 1         | 26062       | 615      | Cover               | 1         | 26134       |

\* Kit includes items 248, 300, 312, 313, 606-616 and 618.

† Available only as part of item 314.

• Recommended Spare

# MOTOR ASSEMBLY AND PARTS LIST FOR REMOVAL



(Dwg. MHP1320)

| ITEM NO. | DESCRIPTION OF PART | QTY TOTAL | PART NUMBER | ITEM NO. | DESCRIPTION OF PART | QTY TOTAL | PART NUMBER |
|----------|---------------------|-----------|-------------|----------|---------------------|-----------|-------------|
| 71       | Motor Adapter       | 1         | 25445       | * 238    | Manifold Inlet      | 1         | 24980       |
| * 203    | 'O' Ring            | 1         | 71297477    | * 239    | Gasket              | 1         | 25001       |
| 223      | Capscrew            | 4         | 71306443    | 240      | Sleeve              | 1         | 24977-1     |
| 224      | Motor Housing       | 1         | 23305       | * 242    | Spool               | 1         | 24975-1     |
| * 228    | Motor Cover         | 1         | 24961       | * 245    | Setscrew            | 1         | 71291371    |
| 229      | Capscrew            | 6         | 71307292    | * 262    | Wire Tie            | 1         | 54235       |
| * 231    | Capscrew            | 1         | 71262141    | * 280    | Tube                | As Req.   | 71261374    |
| * 232    | Gasket              | 1         | 71044960    | 616      | Fitting, Cap        | 1         | 71111975    |
| * 233    | Capscrew            | 4         | 71307284    | 617      | Elbow Fitting       | 1         | 52182       |
| * 237    | Tube Fitting        | 2         | 71273114    | 618      | Setscrew            | 2         | 71128656    |

\* Items discarded during retrofit.