

## IMPORTANT INFORMATION:

- A copy of our “Safe Operating Practices” Manuals are always available free of charge either by downloading it from our Technical Publications website @ [www.airwinch.com](http://www.airwinch.com) or by contacting the Factory at (800) 866-5457 for North America and (206) 624-0466 for International. The Safe Operating Practices manual must be read prior to anyone operating a **Ingersoll-Rand** winch or hoist. The manual form numbers are as follows:

“Safe Operating Practices Non-Man Rider™ Winches” Manual, Form No. MHD56250

“Safe Operating Practices for Man Rider™ Winches” Manual, Form No. MHD56251

“Safe Operating Practices for Pneumatic, Hydraulic and Electric Hoists” Manual, Form No. MHD56295

- Available winch options may require additional supplements to the basic winch manual.
- For Man Rider™ winches ensure a copy of the Man Rider™ supplement is made available to the operator prior to winch operation.

### Winch Man Rider™ Supplements:

Model:	Publication No.
FA2, FA2.5, FH2, FH2.5	MHD56046
FA5	MHD56042 and MHD56220
FA10	MHD56252
FA2.5A	MHD56236
FA2B and HU40A	MHD56207
FH10MR	MHD56212
Fulcrum Electric	MHD56277
LS500HLP/ LS1000HLP	SAM0004

Model:	Publication No.
LS500RLP	SAM0011
LS1000RLP	SAM0012
LS150RLP	SAM0082
LS150RLP/500/ 1000	SAM0115
LS150RLP and LS150PLP-PH	SAM0120
LS500RLP-E	SAM0122
LS150RLP- DP5M-F	SAM0184
LS150HLP	SAM0222

- We strongly recommend that ALL maintenance on **Ingersoll-Rand** equipment be carried out by personnel certified by **Ingersoll-Rand**, or by **Ingersoll-Rand** Authorized Service Centers.
- Contact the Factory if in doubt about installation, operation, inspection and maintenance instructions.
- Use only Genuine **Ingersoll-Rand** parts when maintaining or repairing a winch, hoist or any component of a winch or hoist.
- ANSI / ASME recommends that a winch or hoist (or any components of a winch or hoist) that has been repaired be tested prior to being placed into service:
  - \* **Winches** - ANSI / ASME B30.7 (BASE MOUNTED DRUM HOISTS) Refer to section 7.2.2 - Testing.
  - \* **Hoists** - ANSI / ASME B30.16 (OVERHEAD HOISTS - UNDERHUNG) Refer to section 16.2.2 - Testing.

# INSTRUCTION AND PARTS SHEET

## Model FA7 GUIDELINE WINCH

Form MHD56130

This instruction and parts sheet covers the operation and adjustment of the Guideline controls for the FA7 winch. This sheet gives authorized service personnel the information necessary to adjust the Guideline controls.

This sheet should be used in conjunction with the FA7 Parts, Operation and Maintenance Manual, form MHD56076.

FA7 Guideline winches are equipped with assemblies that are specific to guideline operation they are, drum locking assembly, guideline control valve assembly, and reduction gearbox assembly.

Operators should familiarize themselves with these features, how they operate and any other safety procedures provided in the FA7 Parts, Operation and Maintenance Manual, form MHD56076.

### OPERATION

#### Description of Operation

With the auxiliary valve selector lever in the **Normal** position, the winch control valve will provide normal winch operation. With the auxiliary valve selector lever in the **Guideline** position, the winch will automatically Haul-In wire rope to maintain tension.

The auxiliary valve provides a preset air pressure to the air motor and disc brake. This allows the brake to be released, and the winch to Over-Haul during **Guideline** operations. In this position the winch will maintain a constant tension on the guideline while the load is being lowered.

The auxiliary valve is factory-set to maintain tension based on the weight of 5000 ft. (1524 m) of 3/4 in. (19 mm) submerged wire rope. See Regulator Adjustment section for adjusting procedures.

#### Operation

Place the selector lever in **Normal** position and use the winch control valve to position the end of the load line at the load. Connect the load line to the load and actuate the control valve to remove slack from load line.

#### CAUTION

- If there is slack in the load line when the selector lever is placed into **GUIDELINE** position, the wire rope will **SNAP** tight as the winch automatically maintains tension.

Actuate the selector lever to **Guideline** position. The winch will automatically Haul-In to maintain tension on load line.

When the load is at the work location, shift the selector lever to **Normal** mode and lock the drum using the locking dog.

#### Locking Dog Operation

To engage locking dog, grab both grips on the locking dog handle and pull outwards, rotate handle 90 degrees and allow handle to return to the deep slots in cap. Pin will engage locking pin hole in drum flange, locking drum in position. If pin does not line up with locking pin hole in drum flange, use the winch control valve to slowly rotate the drum to the **NEAREST** locking position on drum.

To disengage locking dog, grab both grips on the locking dog handle and pull outwards, rotate handle 90 degrees and allow handle to return to the shallow slots in cap.

### REGULATOR ADJUSTMENT

The regulator (721) on bracket (742) is factory-set at about 50 psig (3.5 Bar/349 kPa). This will maintain a tension of 4500 lb. (2045 kg) on the load line. If this setting is not adequate (i.e. wire rope tension is not being maintained), increase the regulator pressure.

Ensure that winch control valve is locked in the neutral position and that selector lever is in the **Normal** position.

#### WARNING

- The air supply is **NOT** turned off when adjusting the regulator. Only allow one person to be involved in adjusting regulator too limit accidental activation of winch.

#### Adjustment Procedure

Refer to Dwg. MHP1175.

1. Remove valve handle ball (722).
2. Remove cover (706).
3. Loosen jam nut on regulator.

Form MHD56130

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# INGERSOLL-RAND

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# MATERIAL HANDLING

## REGULATOR ADJUSTMENT

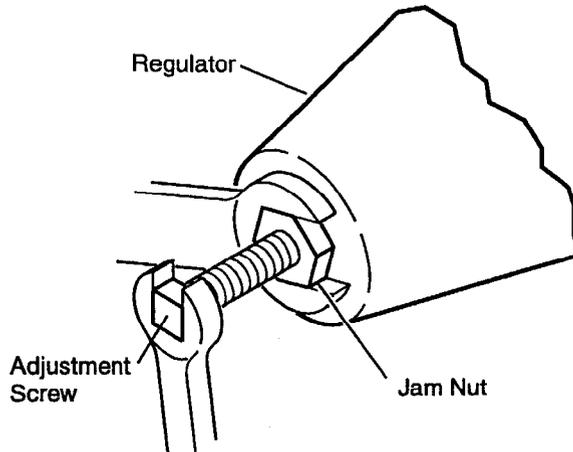
### ⚠ CAUTION

• If there is slack in the load line when the selector lever is placed into **GUIDELINE** position, the wire rope will **SNAP** tight as the winch automatically maintains tension.

4. Place selector lever into **Guideline** position.
5. Observing pressure gauge (707), rotate adjustment screw.
6. Increase or decrease pressure setting in 5 psig (0.35 Bar/34 kPa) increments, until required tension is established.

### ⚠ CAUTION

• Continuous overhauling at pressures equal or greater than 70 psig (4.8 Bar/483 kPa) could cause damage to winch.



(Dwg. MHP1175)

## LUBRICATION

### Air Motor

The air motor is splash lubricated by the oil in the motor housing and has no other means of lubrication. It is therefore important to use high quality rust and oxidation inhibited lubricant to ensure maximum performance and minimum down time for repairs.

### Reduction Gearbox and Brake

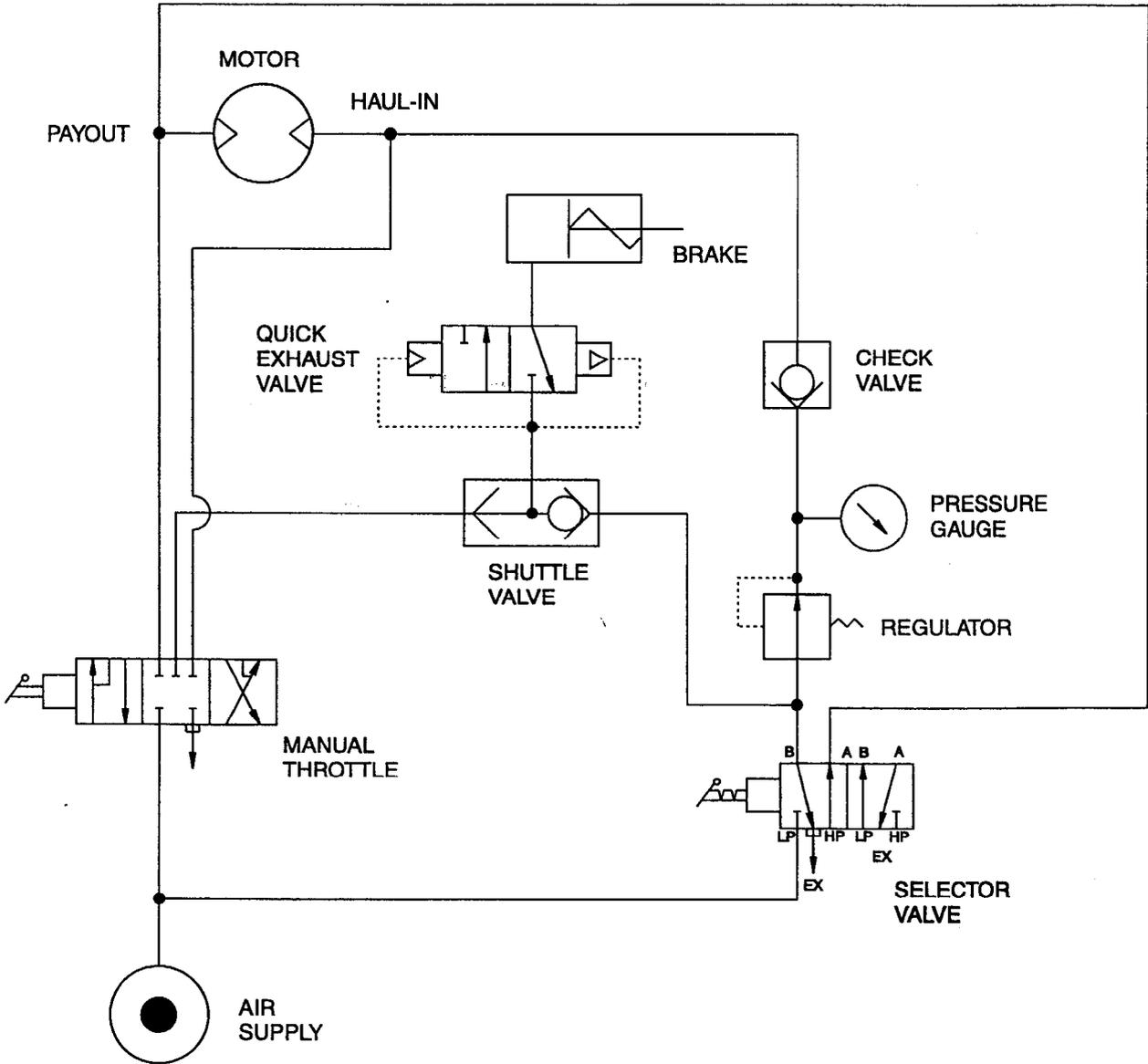
These components are splash lubricated by the oil in the housing and have no other means of lubrication. It is therefore important to use high quality Extreme Pressure (EP) rust and oxidation inhibited gear oils to ensure maximum performance and minimum down time for repairs.

### Lubrication Chart

Component	Capacity	Temperature	Recommended Viscosity
Reduction Gearbox and Brake	1.1 gal (4.1 L)	Below 32° F (0° C)	ISO VG 68 (20W)
		32° to 80° F (0° to 27° C)	ISO VG 100* (30W)
		Above 80° F (27° C)	ISO VG 150 (40W)
Air Motor	3 qt (2.8 L)	Below 32° F (0° C)	ISO VG 46 (15W)
		32° to 80° F (0° to 27° C)	ISO VG 68* (20W)
		Above 80° F (27° C)	ISO VG 100 (30W)

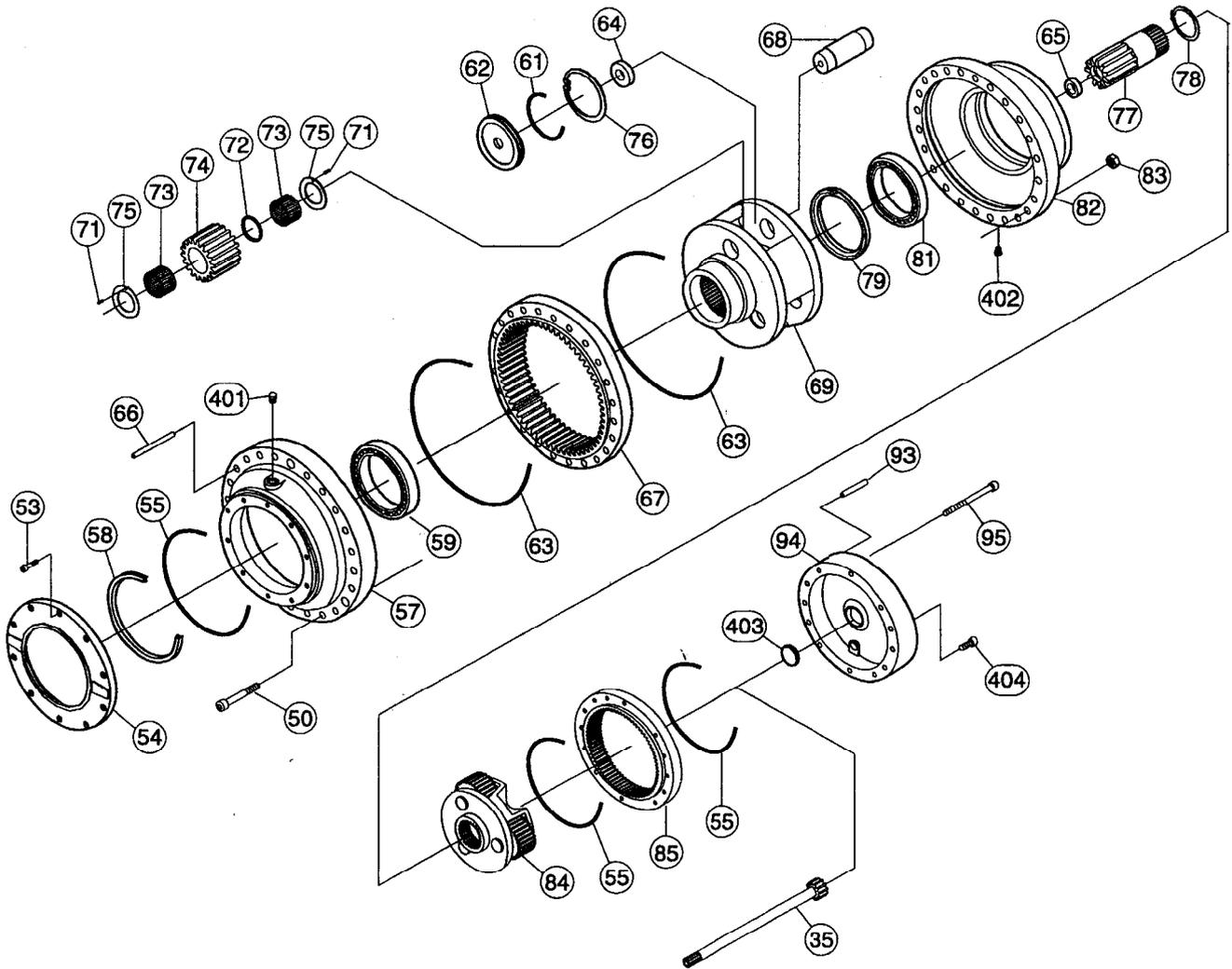
\* Units are shipped from the factory with this oil

# AIR SCHEMATIC



(Dwg. MHP1176)

# REDUCTION GEARBOX ASSEMBLY PARTS DRAWING



(Dwg. MHP1174)

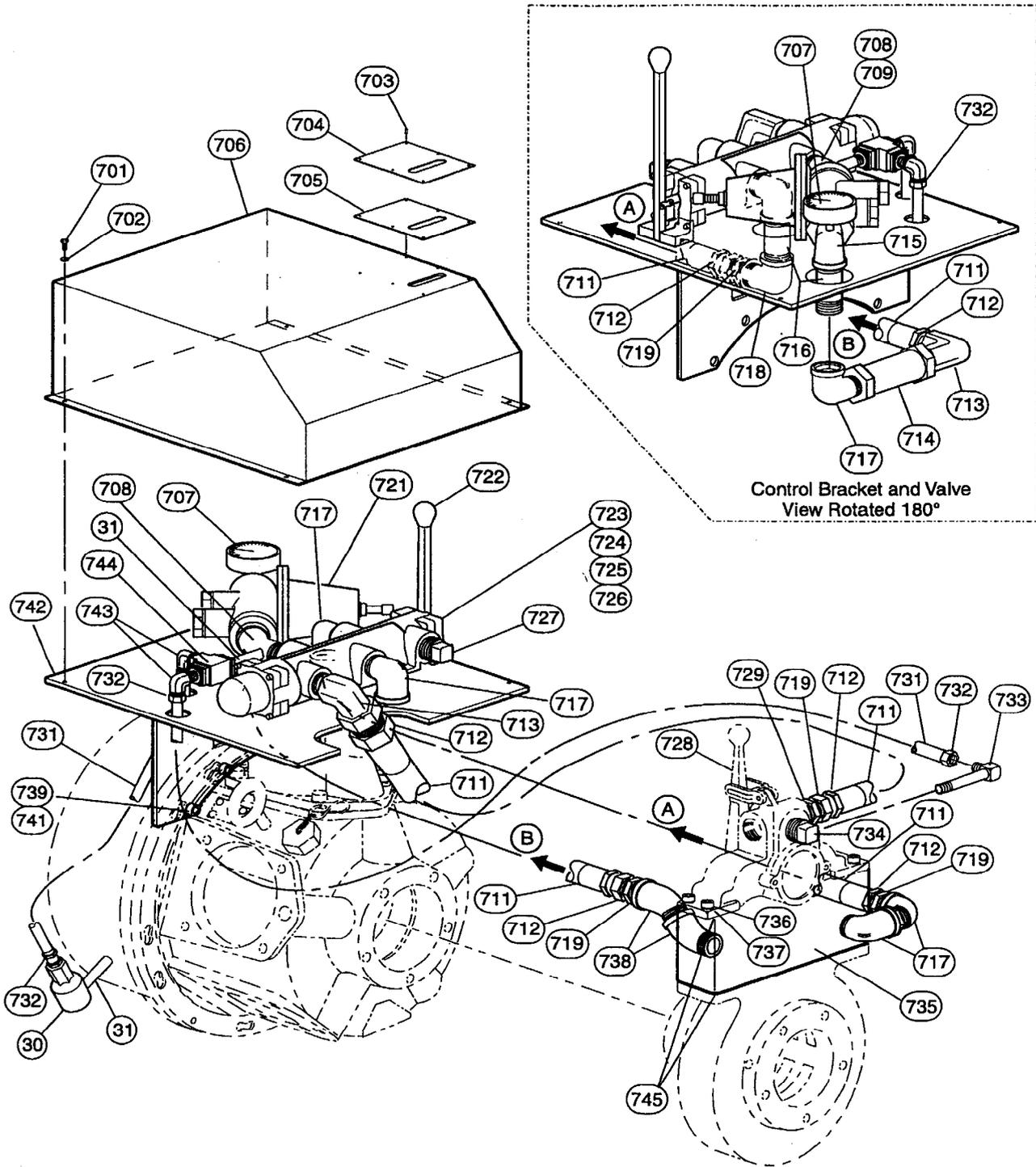
## REDUCTION GEARBOX ASSEMBLY PARTS LIST

ITEM NO.	DESCRIPTION OF PART	QTY TOTAL	PART NUMBER	ITEM NO.	DESCRIPTION OF PART	QTY TOTAL	PART NUMBER
*	Reduction Assembly	1	71307953	• 73	Bearing Roller	204	71138952
35	Shaft	1	25629	74	Planetary Gear	3	154-3778
50	Capscrew	12	71112270	• 75	Thrust Bearing	6	71138903
53	Capscrew	10	154-2520	76	Retainer Ring	1	71138986
54	Oil Seal Support	1	71138937	77	Sun Gear	1	154-1648
• 55	O' Ring	3	154B3488	78	Retainer Ring	1	71068597
57	Output Housing	1	71138929	• 79	Bearing Spacer	1	71139042
58	Oil Seal	1	154B3488	• 81	Bearing Ball	1	71138960
• 59	Bearing Ball	1	71139117	82	Input Housing	1	71138911
• 61	O' Ring	1	154B3212	83	Nut	12	71112288
62	Thrust Plate	1	154B2800	84	Planetary Assembly	1	154-1914
• 63	O' Ring	2	154B3626	85	Ring Gear	1	71068514
64	Thrust Plate	1	154B2807	93	Pin	4	71068464
• 65	Thrust Bearing	1	154B2806	94	End Cover	1	154-1798
66	Pin	3	71139026	95	Capscrew	8	154-2528
67	Ring Gear	1	71138887	401	Plug	4	154-2710
68	Shaft, Planet Gear	3	71138895	402	Magnetic Trap	4	154-2713
69	Planetary Support	1	154B2875	403	Thrust Plate	1	154-1711
71	Spring Pin	6	71139018	404	Plug	2	71068571
72	Spacer	3	71139034				

• Recommended spare.

\* Reduction Gear Assembly includes all items listed above, except item 35.

# GUIDELINE CONTROL VALVE ASSEMBLY PARTS DRAWING

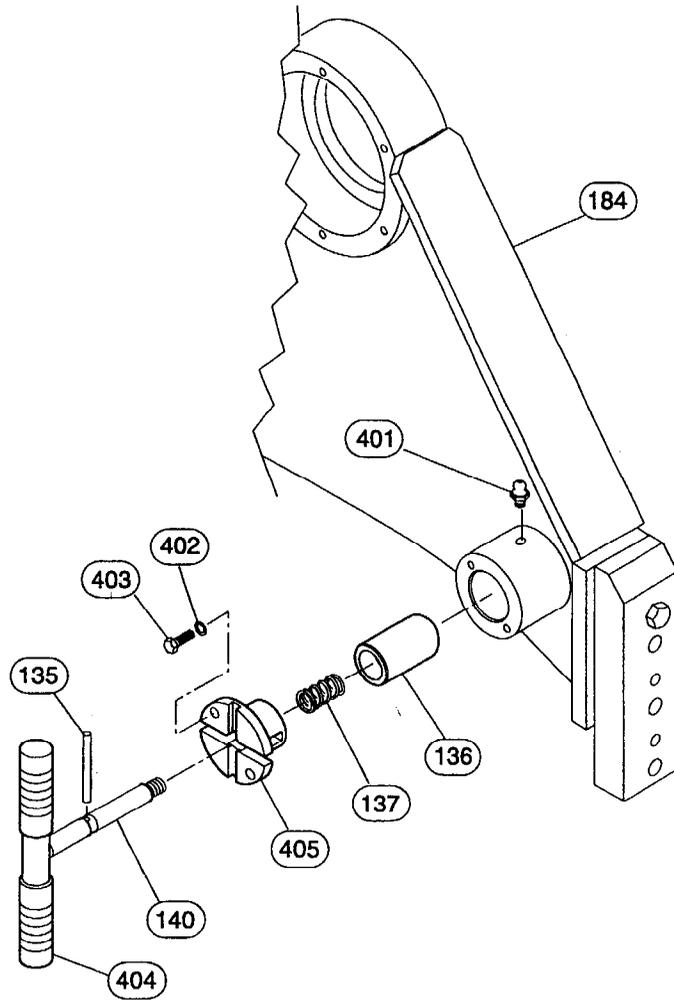


(Dwg. MHP1171)

## GUIDELINE CONTROL VALVE ASSEMBLY PARTS LIST

ITEM NO.	DESCRIPTION OF PART	QTY TOTAL	PART NUMBER	ITEM NO.	DESCRIPTION OF PART	QTY TOTAL	PART NUMBER
30	Dump Valve	1	50276	723	5-Way Valve	1	71316434
31	Fitting, Nipple	2	50859	724	Spacer	3	14998-8B
701	Capscrew	4	71127054	725	Capscrew	3	71319073
702	Washer	4	71320964	726	Nut	3	71320931
703	Rivet	6	50915	727	Plug	1	52304
704	Label	1	25880	728	Control Valve	1	K5B-REMOTEP
705	Gasket	1	25975	729	Reducer	1	71320923
706	Cover	1	25884	731	Hose	2.66 ft	50923
707	Gauge, Pressure	1	71272686	732	Fitting, Hose End	4	51029
708	Fitting, Elbow	1	26056	733	Fitting, Elbow	1	71149975
709	Fitting, Nipple	1	50933	734	Plug	1	71263297
711	Hose	3.25 ft	51003	735	Manifold	1	25874
712	Hose End	6	51002	736	Capscrew	4	71069041
713	Fitting, Elbow	2	51001	737	Washer	4	51581
714	Check Valve	1	71320916	738	Fitting, Elbow	2	54244
715	Fitting, Elbow	1	26057	739	Washer	4	71320956
716	Pipe Nipple	2	71320907	741	Capscrew	4	71320949
717	Fitting, Elbow	5	54243	742	Bracket, Control	1	25873
718	Fitting, Elbow	1	50928	743	Fitting, Elbow	2	52182
719	Fitting, Connector	4	71308258	744	Valve, Shuttle	1	50277
721	Regulator	1	71316996	745	Gasket	2	K5B-547
722	Ball, Handle	1	71138051				

# LOCKING DOG ASSEMBLY DWG AND PARTS LIST



(Dwg. MHP1237)

ITEM NO.	DESCRIPTION OF PART	QTY TOTAL	PART NUMBER	ITEM NO.	DESCRIPTION OF PART	QTY TOTAL	PART NUMBER
135	Dowel Pin	1	71316632	401	Grease Fitting	1	71111942
136	Pin	1	25858	402	Washer	2	51581
137	Spring	1	71316624	403	Capscrew	2	71316483
140	Handle	1	25861	404	Grip	2	51845
184	Upright, Outboard	1	26103	405	Cap	1	25860