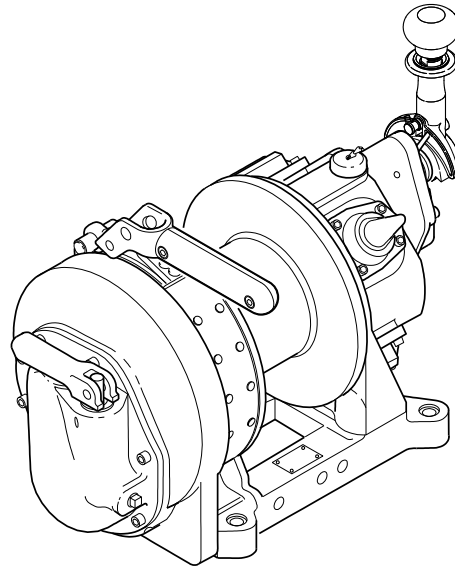


Product Parts Information



BU7A AIR WINCH



(Dwg. MHP1233)



Save These Instructions

Only allow **Ingersoll Rand** trained technicians to perform maintenance on this product. For additional information contact **Ingersoll Rand** factory or nearest Distributor.

For additional supporting documentation refer to Table 1 'Product Information Manuals' on page 2. Manuals can be downloaded from www.ingersollrandproducts.com.

The use of other than genuine **Ingersoll Rand** replacement parts may result in safety hazards, decreased performance and increased maintenance and will invalidate all warranties. The original language of this manual is English.

Refer all communications to the nearest **Ingersoll Rand** Office or Distributor.

Table 1: Product Information Manuals

Publication	Part/Document Number	Publication	Part/Document Number
Product Safety Information Manual	MHD56250	Product Maintenance Information Manual	MHD56461
Product Information Manual	MHD56381		

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PARTS ORDERING INFORMATION

These products are designed and constructed to provide long, trouble-free service. In time it may be necessary to order and install new parts to replace those that have been subjected to wear.

For your convenience and future reference, it is recommended that the following information be recorded.

Model Number _____

Serial Number _____

Date Purchase _____

When ordering replacement parts, please specify the following:

1. Complete model number and serial number as it appears on the data (name) plate.
2. Part number(s) and part description as shown in this manual.
3. Quantity required.

The data (name) plate is located on the product.

NOTICE

- Continuing improvement and advancement of design may cause changes to this equipment which are not included in this manual. Manuals are periodically revised to incorporate changes. Always check the manual edition number on the front cover for the latest issue.
- Sections of this manual may not apply to your product.
- The use of other than genuine Ingersoll Rand replacement parts will result in safety hazards, decreased performance and increased maintenance, and will invalidate all warranties.

■ Return Goods Policy

Ingersoll Rand will not accept any returned goods for warranty or service unless prior arrangements have been made and written authorization has been provided from the location the goods were purchased.

Products that have been modified without **Ingersoll Rand** approval, mishandled or overloaded will not be repaired or replaced under warranty. A printed copy of the warranty that applies to this product is provided inside the back cover of this manual.

■ Disposal



When the life of the product has expired, it is recommended that it be disassembled, degreased and parts separated as to materials so that they may be recycled.

For additional information contact:

Ingersoll Rand

2724 Sixth Avenue South
Seattle, WA 98134 USA
Phone: (206) 624-0466
or (866) 273-3278
Fax: (206) 624-6265

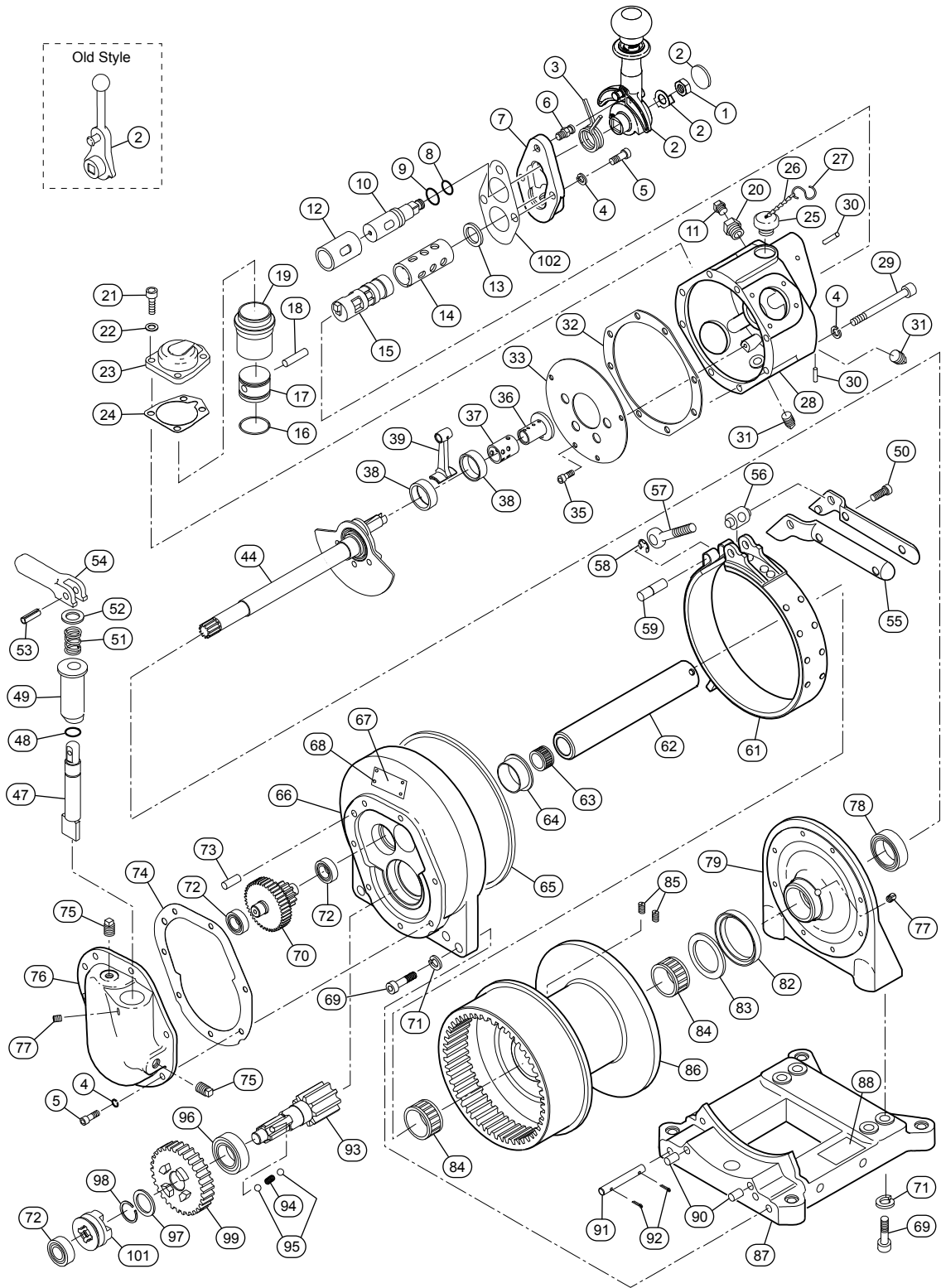
or

Ingersoll Rand

Douai Operations

529, Avenue Roger Salengro
59450 Sin Le Noble, France
Phone: (33) 03-27-93-08-08
Fax: (33) 03-27-93-08-00

WINCH ASSEMBLY DRAWING



(Dwg. MHP1207)

WINCH ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number	Item No.	Description of Part	Total Qty	Part Number
1	Reverse Valve Nut	1	95208831	47	Clutch Eccentric Shaft (Manual brake models only)	1	BU-857A
• 2	Throttle Lever Assembly	1	382-32535-S	• 48	'O' Ring	1	PS3-67
	Throttle Lever (old style)		Note 1		Bushing	1	BU-964
3	Throttle Lever Spring (Note 2)	1	382-30373	49	Bushing (Model BU7APTAB only)		BU7A-728
4	Lockwasher (pack of 8)	17	T11-58-5	50	Brake Lever Screw	2	51014
5	Capscrew	9	52333	• 51	Clutch Lever Spring (Manual brake models only)	1	H02-81C
6	Throttle Spring Stop Pin	1	BU-553	52	Clutch Lever Washer (Manual brake models only)	1	BU-962
7	Valve Chest Cover (incl's items 6, 13 and 102)	1	BU-K546A	53	Clutch Lever Pin (Manual brake models only)	1	BU-870A
• 8	'O' Ring	1	410-283	54	Clutch Lever (Manual brake models only)	1	BU-556B
	'O' Ring (Natural Gas)		71463962	• 55	Brake Lever (incl's item 50) (Manual brake)	1	BU-151A
9	'O' Ring	1	BU-948	• 56	Brake Trunnion	1	BU-159
	'O' Ring (Natural Gas)		71463921	57	Brake Adjusting Screw (incl's items 58 and 59)	1	BU-K158A
10	Reverse Valve Assembly (incl's items 1, 8 and 9)	1	BU-9K44A	58	Retainer Ring	1	71307276
11	Plug	1	C6H20A-79	59	Brake Band Pin	1	BU-147A
12	Reverse Valve Bushing Kit (incl's Loctite® 609) (Model BU7APTAB only)	1	BU7A-K945	• 61	Brake Band Assembly	1	BU-A152
			BU7ARC-945	62	Drum Shaft Assembly (incl's item 63)	1	BU7A-A459
13	Rotary Valve Thrust Washer	1	BU-552A	63	Drum Shaft Assembly (incl's item 63)		BU7A-A459-1
14	Rotary Valve Bushing Kit (incl's Loctite® 609)	1	BU7A-K525	63	Motor Pinion Bearing	1	R2H-606
15	Rotary Valve	1	BU-526	64	Drum Thrust Sleeve	1	BU-468
• 16	Piston Ring Kit	8	D01-337-8	65	Drum Seal	1	BU7A-137
17	Piston Assembly (incl's item 16)	4	D01-A513B	66	Gear Case Assembly (incl's items 64, 65 and 73)	1	BU7A-A353
18	Piston Wrist Pin	4	TC-389B	67	Nameplate	1	BU-301-R
19	Cylinder Sleeve	4	D01-L505A	68	Rivet	12	71028849
20	Inlet Bushing	1	54878	69	Capscrew	8	54662
21	Capscrew	16	50156		Capscrew (Model BU7APTAB only)	6	
22	Washer (Copper)	16	D01-504	70	Intermediate Gear	1	BU-364
23	Cylinder Head	4	D01-H505A	71	Lockwasher	8	50181
• 24	Cylinder Gasket	4	D01-507	72	Bearing	3	TB-394
	Cylinder Gasket (Natural Gas)		D01-507-1	73	Dowel	1	D10-527
25	Vent Cap Assembly (incl's items 26 and 27)	1	DLC-303	• 74	Gasket	1	BU-931
26	Vent Cap Chain	1	D02-891	75	Grease Plug	2	T1SE-368-3/8
27	'S' Hook	1	D02-421	76	Gear Case Cover (incl's item 75)	1	BU-352
28	Motor Case Assembly (incl's items 12, 14, 20, 30 and 31)	1	BU-501A	77	Setscrew	1	R3SM-574
	Motor Case Assembly (BU7APTAB only) (incl's items 14, 20, 30, 31 and 218)		BU7ARC-501	78	Crank Bearing	1	58-96
29	Capscrew	8	71126908	79	Motor Mount Bracket	1	BU-502
30	Bushing Key	2	N00-15		Motor Mount Bracket (Natural Gas)		BU-502-1
31	Oil Plug	2	50822	82	Grease Seal	1	BU-866
• 32	Gasket	1	BU-592	83	Thrust Plate	1	BU-469
	Gasket (Natural Gas)	4	BU-592-1	84	Bearing	2	BU-466
33	Oil Wall	1	BU-500	85	Setscrew	2	BU-381
35	Screw	4	J-376	86	Drum Assembly (incl's items 82 through 85)	1	BU7A-A324
36	Crank Pin Sleeve	1	BU-519	87	Base (incl's item 90)	1	BU-564A
37	Bushing	1	D01-511A	88	Warning Label	1	71270813
38	Ring	2	D01-510	90	Dowel Pin	2	844-407
39	Connecting Rod	4	D01-509A				
44	Crank Assembly	1	BU7A-A516A				
	Crank Assembly (Natural Gas)		BU7A-A516A-1				

Note 1: New style handle assembly on serial numbers BU009356 and above, when replacing old style lever order item (2).

Note 2: New spring (3) on serial numbers BU002172 and above, if winch spring has not been previously replaced, order new.

• Recommended spares.

WINCH ASSEMBLY PARTS LIST CONTINUED

Item No.	Description of Part	Total Qty	Part Number	Item No.	Description of Part	Total Qty	Part Number
91	Brake Anchor	1	BU-206	101	Clutch Jaw	1	BU-568A
92	Pin, Cotter	2	53456	102	Valve Chest Gasket	1	26603
93	Drive Shaft	1	BU-358		Valve Chest Gasket (Natural Gas)		26603-1
94	Clutch Jaw Lock Spring (Manual brake models only)	1	533-664	103	Pipe, Exhaust (Natural Gas) (Note 3) *	1	382-32006
95	Clutch Jaw Lock Ball	2	4U-722	104	PAG Synthetic Oil (Natural Gas) (Note 3) *	0.25 qt.	71468888
96	Inner Bearing	1	50460	105	Seal (Natural Gas) (Note 3) *	1	71465371
97	Washer	1	BU-363A	230	Inlet Plug* (Model BU7APTAB only)	1	C6H20A-79
98	Retainer Ring	1	50810	242	Tag, Caution, Oil Use (Natural Gas) (Note 3) *	1	71470744
99	Drive Gear	1	BU-357	249	Label, Warning (Natural Gas) (Note 3) *	1	71352769

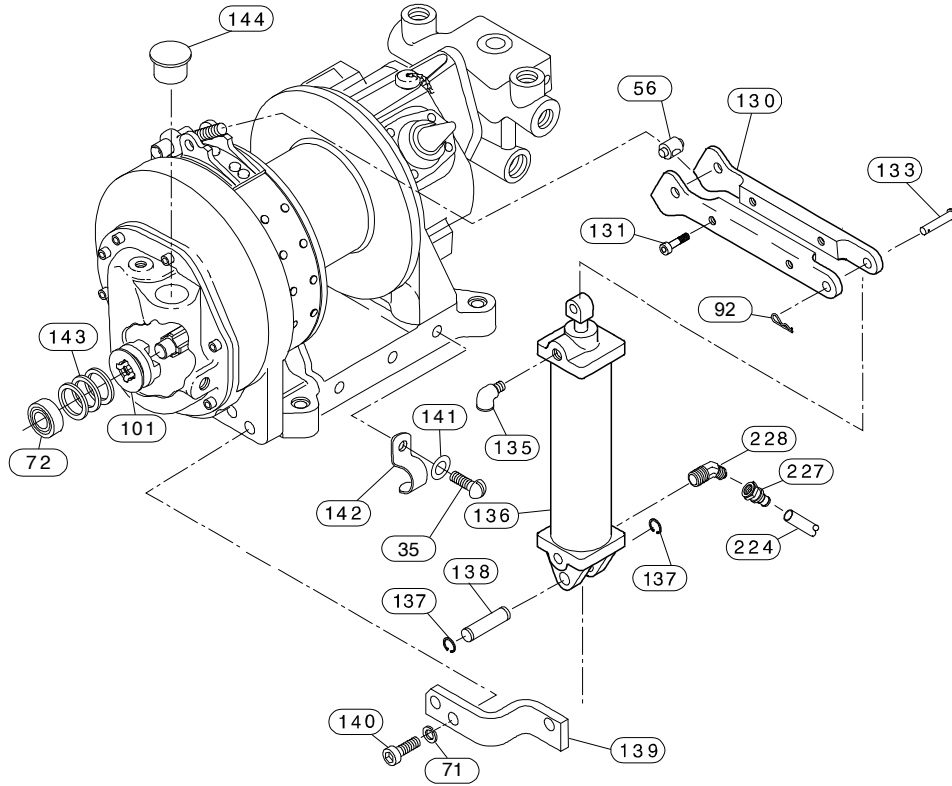
* Not Illustrated

Note 3: Item numbers (103 — 105, 242 and 249) are only used on the natural gas style winches and are not illustrated in this document.

KITS, SPECIAL TOOLS AND ACCESSORIES

Description	Part Number
Piston Ring Compressor to compress Piston Rings (16) on Cylinder (19)	D01-933
Wire Rope Lubricant, 13 oz. spray can	LUBRI-LINK-GREEN
Brake Lining Repair Kit	BU-K155
Drum Guard Assembly Kit	BU7A-K298A
Air Strainer, 3/4 in. NPT	EU-A267
Lubricator, 3/4 in. NPT	L30-06-000
Filter, 3/4 in. NPT	F30-06-000
Muffler	52104
Portable Air Line Lubricator, 1 in. NPT 16 fl. oz.	16LUB16C
Shut-off Pipe Line Valve, 1 in. NPT 2 way	RC5-160
Regulator, 3/4 in. NPT	R28-06-F0G0-28
Air Motor Service Kit (incl's items 2, 3, 5, 6, 8, 9, 16, 19, 21, 22, 24, 29, 32, 102, 217)	71407712
Throttle Replacement Kit (incl's items 1, 2, 3)	382-31179

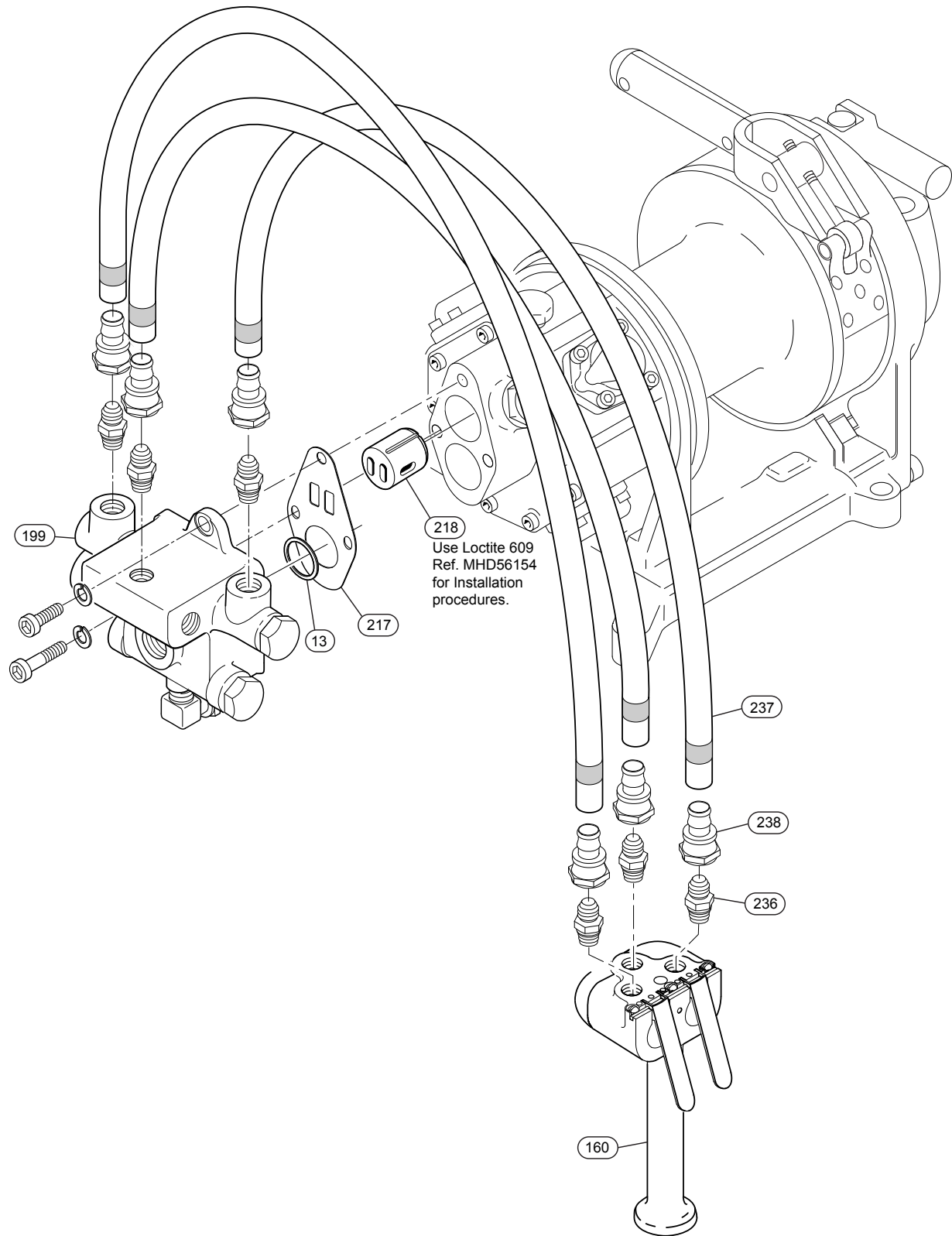
AUTOMATIC BRAKE ASSEMBLY DRAWING AND PARTS LIST



(Dwg. MHP1210)

Item No.	Description of Part	Total Qty	Part Number
35	Screw	1	J-376
56	Brake Trunnion	1	BU-159
71	Lockwasher	2	50181
72	Bearing	1	TB-394
92	Cotter Pin	1	53456
101	Clutch Jaw	1	BU-568A
130	Brake Lever (incl's item 131)	1	BU7A-718
131	Capscrew	2	51014
133	Pin	1	UWB-1569
135	Fitting Elbow, Exhaust	1	HUS-912
136	Brake Cylinder	1	BU7A-720
137	Retainer Ring	2	Included with Item 136
138	Pin	1	
139	Brake Cylinder Mounting Bracket	1	BU7A-721
140	Capscrew	2	52379
141	Lockwasher	1	51801
142	Hose Clamp	1	D6100A-727
143	Clutch Jaw Spacer	3	TRD-1625
144	Plug	1	BU7A-728
224	Hose (Bulk)	Specify Length	50923
227	Fitting, Hose End	2	51029
228	Fitting, Elbow	1	EL45-4B437

LIVE AIR REMOTE CONTROL VALVE ASSEMBLY DRAWING

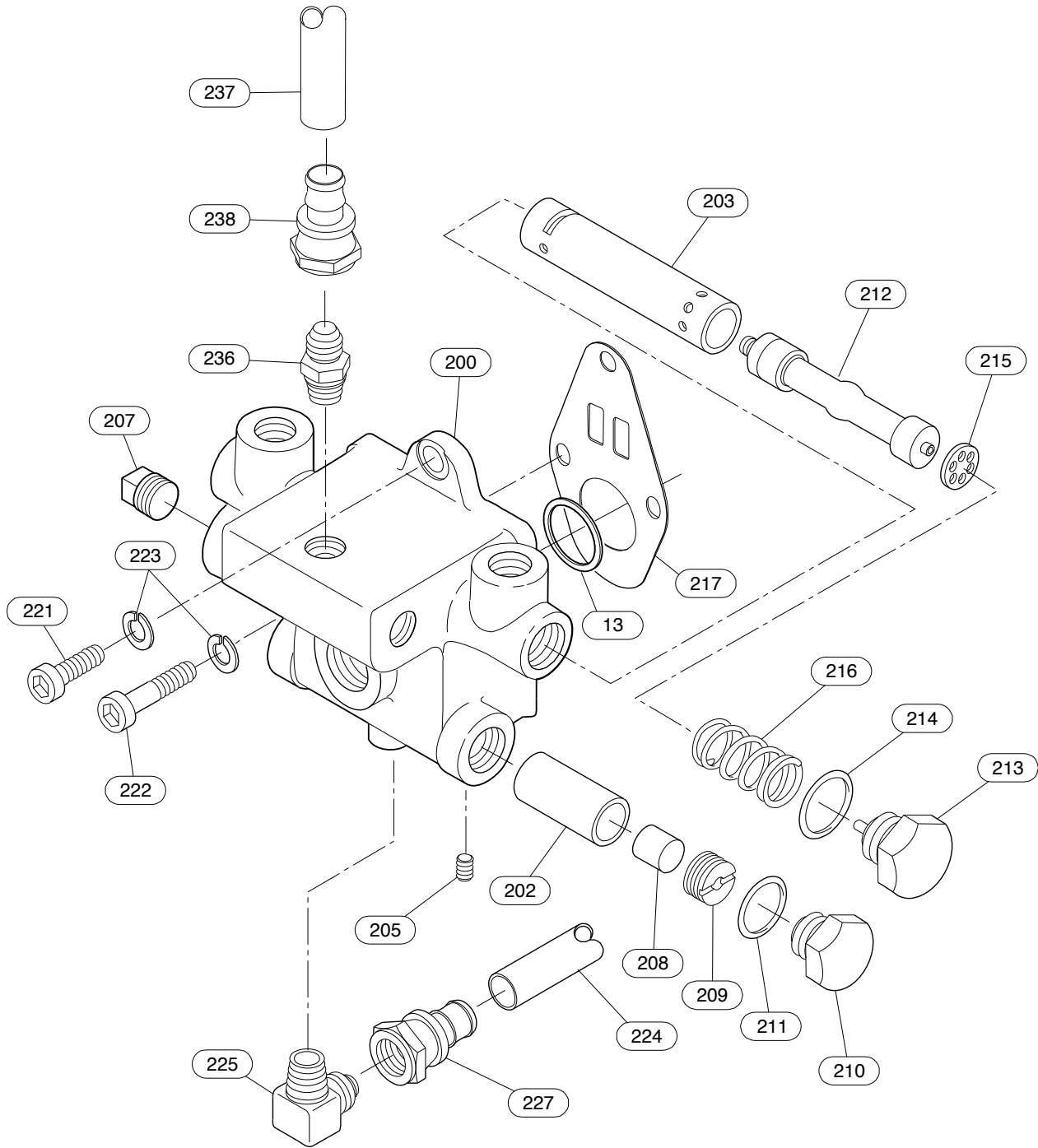


(Dwg. MHP2221)

LIVE AIR REMOTE CONTROL VALVE ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number
13	Washer	1	BU-552A
160	Pendant Assembly (refer to Dwg. MHP1072 on page 18)	1	MR-269C
199	Shuttle Valve Chest Assembly	1	BU7A-A245
217	Valve Chest Gasket	1	BU7A-547
218	Ported Plug	1	BU7ARC-945
236	Fitting, Connector	3	71009815
237	Hose (bulk)	Specify Length	53245
238	Fitting, Hose End	6	53954

SHUTTLE VALVE CHEST ASSEMBLY DRAWING



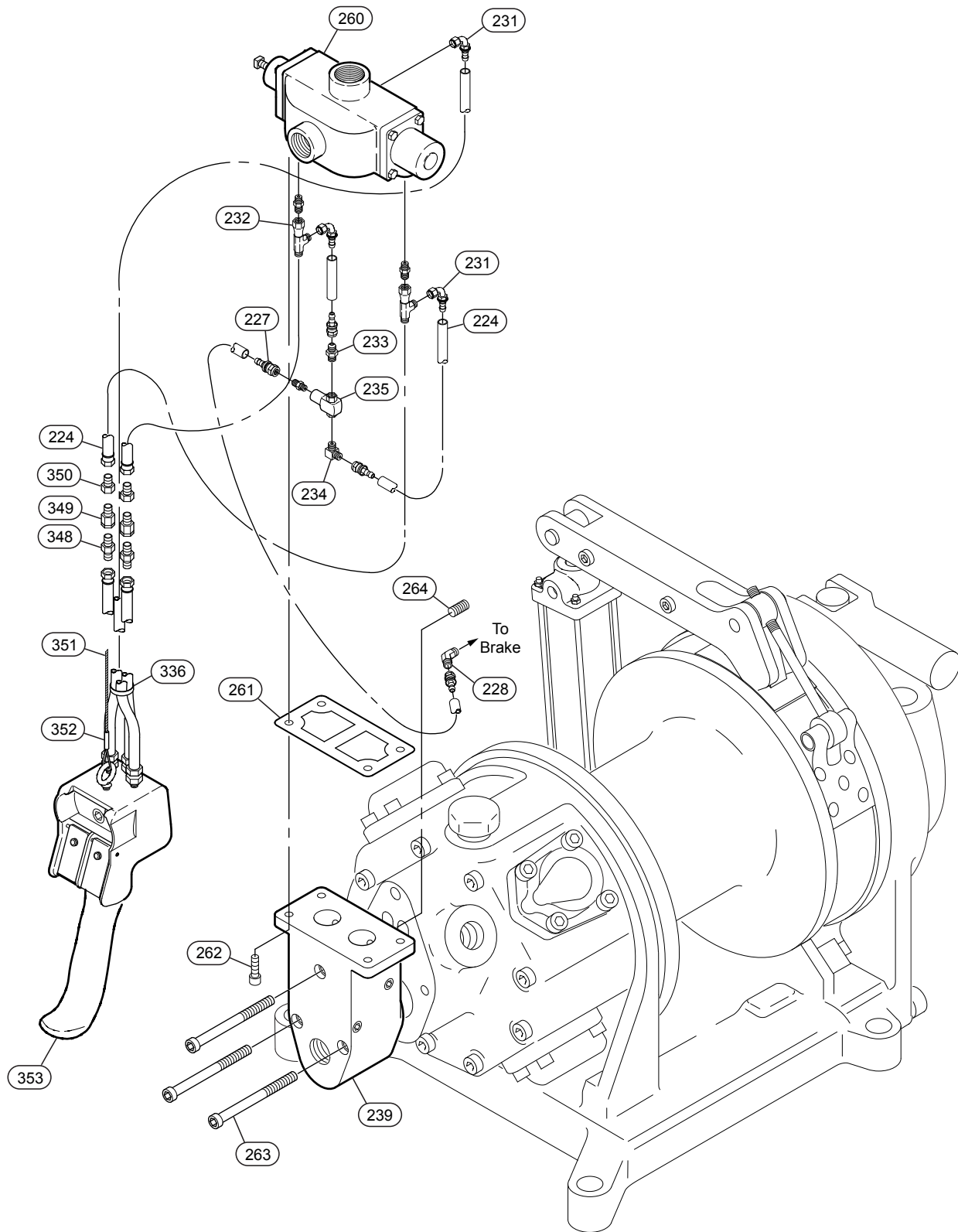
(Dwg. MHP1209)

SHUTTLE VALVE CHEST ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number
13	Washer	1	BU-552A
199	Shuttle Valve Chest Assembly (includes items 200 through 216)	1	BU7A-A245
200	Shuttle Valve Chest	1	BU7A-245
202	Brake Valve Bushing	1	D01-63
203	Shuttle Valve Bushing	1	26069
205	Pipe Plug	2	502-95
207	Air Inlet Plug (shipping only)	1	D02-351
208	Brake Valve	1	D01-62A
209	Brake Valve Seat	2	D01-65
210	Brake Valve Cap	2	D01-943
• 211	Brake Valve Cap Gasket	2	D01-946
212	Shuttle Valve	1	D01-246
213	Shuttle Valve Cap	2	DLC-238
214	Shuttle Valve Cap Gasket	2	G601-411
215	Shuttle Valve Washer	2	DLC-248
• 216	Shuttle Valve Spring	2	DLC-268
• 217	Valve Chest Gasket	1	BU7A-547
221	Capscrew	1	R44H-490A-4
222	Capscrew	2	R4810-68
223	Lockwasher (pack of 5)	3 (order 1 pack)	T11-58-5
224	Brake Hose (Bulk)	Specify Length	50923
225	Fitting, Elbow Brake	1	52182
227	Fitting, Hose End	2	UWD-162
236	Fitting, Connector	3	71009815
237	Control Hose (bulk)	Specify Length	53245
238	Fitting, Hose End	6	53954

• Recommended spares.

PILOT AIR REMOTE CONTROL VALVE ASSEMBLY DRAWING



(Dwg. MHP3092)

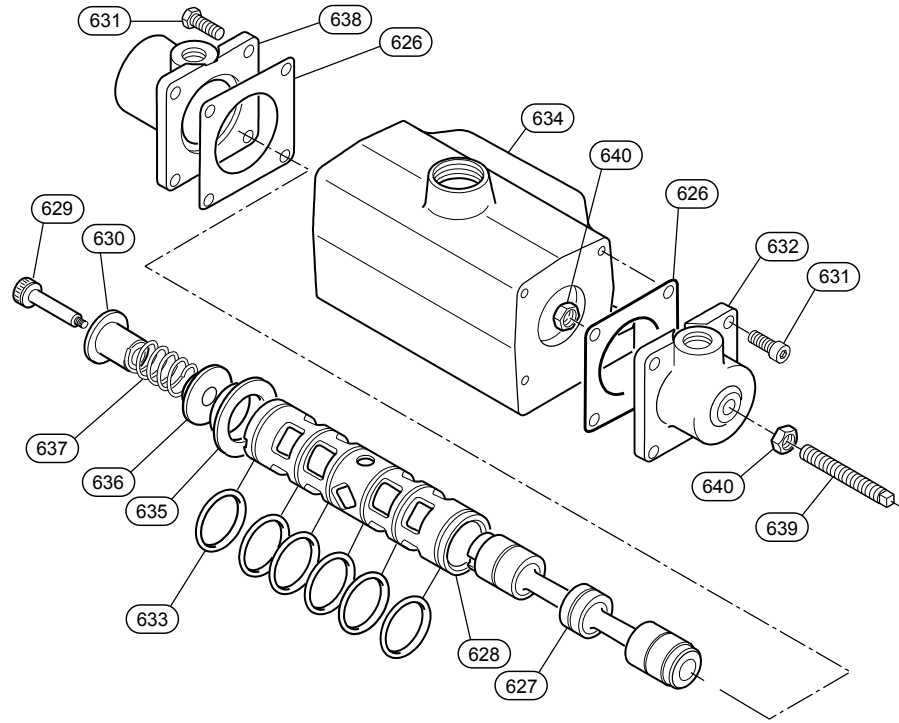
PILOT AIR REMOTE CONTROL VALVE ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number
224	Hose (bulk)	Specify Length	50923
227	Fitting, Hose End	5	51029
228	Fitting, Elbow	1	EL45-4B437
231	Fitting, Swivel Elbow	2	52179
232	Fitting, Swivel Tee	2	71067789
233	Fitting, Connector	1	52092
234	Fitting, Elbow	1	51281
235	Shuttle Valve	1	71266514
239	Manifold	1	71382808
260	Valve Assembly	1	28447
261	Gasket	1	71018386
262	Capscrew	4	71030084
263	Capscrew	3	54090
264	Pipe Plug	2	54292
336	Hose Tie	5	HRE20A-283
349	Exhaust Valve Assembly (incls. items 348 and 350)	*	20417
348	Fitting, Adapter	3	71048268
350	Fitting, Connector	3	71048284
351	Wire, Strain Relief	Specify Length	BWR3A
352	Sleeve Clamp (Note 1)	2	MLK-521
353	Pendant Assembly	1	PHS2E

* Quantity of 2 required when hose length exceeds 20 ft (6 m); Quantity of 4 required when hose length exceeds 50 ft (16 m).

Note 1: A crimping tool (Micropress® Tool with groove size G) is required to install the clamping sleeves.

VALVE ASSEMBLY DRAWING

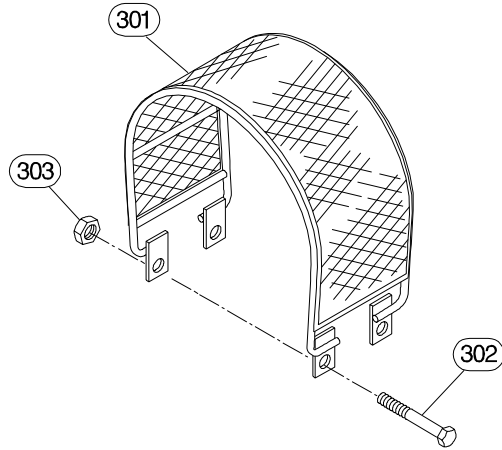


(Dwg. MHP0415)

VALVE ASSEMBLY PARTS LIST

Item No.	Description of Part	Total Qty	Part Number
260	Valve Assembly	1	28447
626	End Cap Gasket	2	51978
627	Valve Spool	1	Order Item 625
628	Valve Sleeve	1	Order Item 625
629	Shoulder Screw	1	71128631
630	Centering Shaft Guide	1	54918
631	Capscrew	8	71028518
632	End Cap	1	54920
633	'O' Ring	6	51632
634	Valve Body	1	Order Item 625
635	Spacer	1	54923
636	Washer	1	54924
637	Spring	1	54925
638	End Cap	1	54926
639	Screw	1	53545
640	Nut	2	50176

DRUM GUARD ASSEMBLY DRAWING AND PARTS LIST

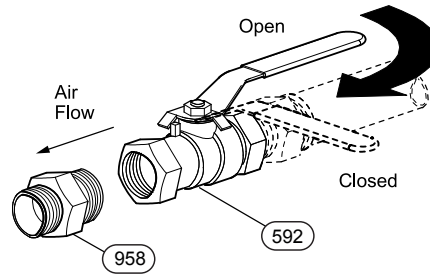


(Dwg. MHP1213)

Item No.	Description of Part	Total Qty	Part Number
300	Drum Guard Assembly	1	BU7A-K298A
301	Drum Guard	1	order item 300
302	Capscrew	2	71329833
303	Nut	2	50171

Note: Remove the minimum amount of mesh from the drum guard to provide clearance for wire rope departure.

SHUT-OFF VALVE ASSEMBLY DRAWING AND PARTS LIST



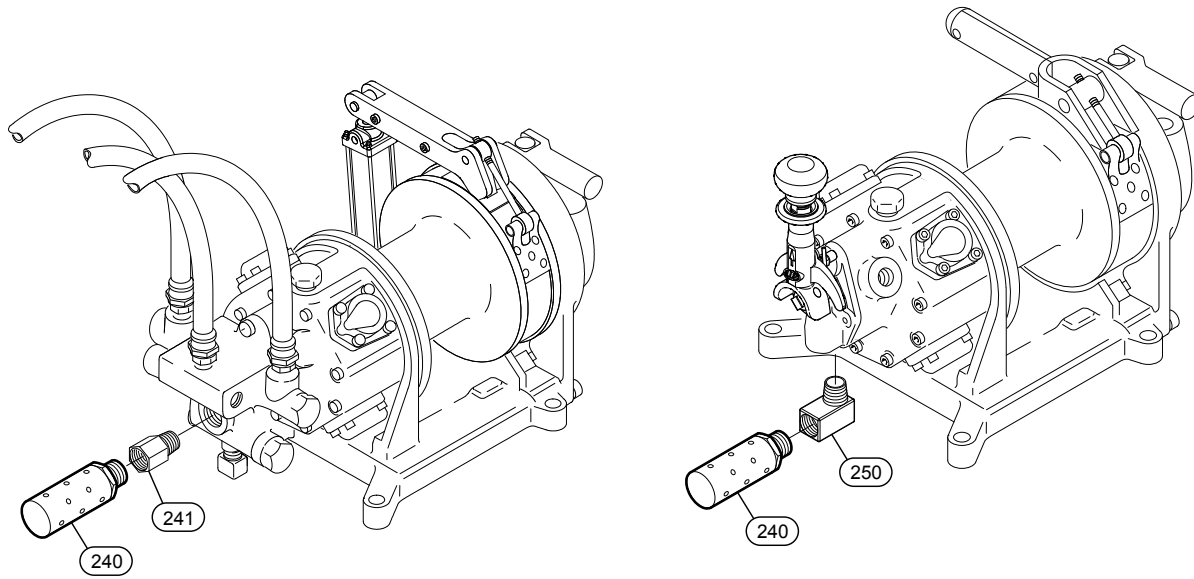
(Dwg. MHP2958)

Item No.	Description of Part	Total Qty	Part Number
592	Valve, Shut-off	1	71404602
958	Fitting, Nipple	1	71056428

MUFFLER ASSEMBLY DRAWING AND PARTS LIST

Live Air Remote

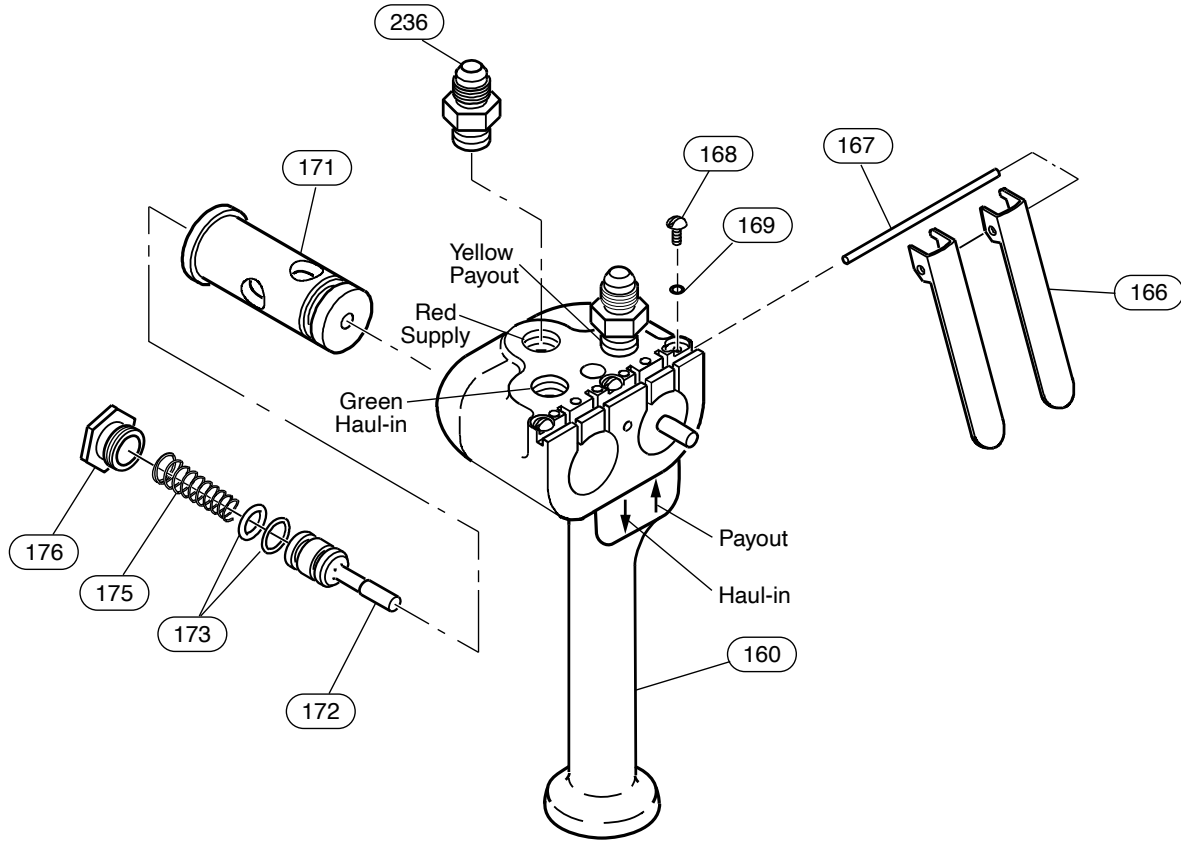
Standard Control



(Dwg. MHP3097)

Item No.	Description of Part	Total Qty	Part Number
240	Muffler	1	52104
241	Fitting, Adapter	1	71386924
250	Fitting, Elbow Reducer	1	71386916

LIVE AIR REMOTE PENDANT THROTTLE HANDLE ASSEMBLY DRAWING AND PARTS LIST



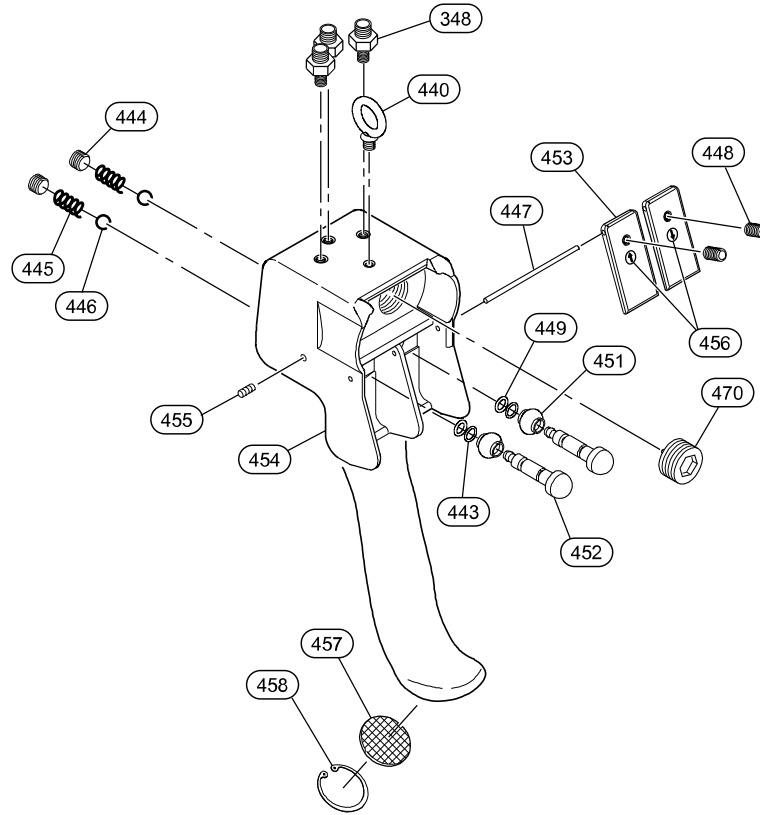
(Dwg. MHP1072)

Item No.	Description of Part	Total Qty	Part Number
160	Pendant Assembly (incl's all items below)	1	MR-269C
166	Throttle Lever	2	MR-273
167	Throttle Lever Pin	1	DLC-120A
168	Screw	3	MLK-SR662
169	Lockwasher	3	D02-138
171	Bushing	2	D02-263A
172	Throttle Valve	2	MR-264
• 173	Throttle Valve Seal Ring	4	AF120-289
• 175	Throttle Valve Spring	2	D01-51A
176	Valve Cap	2	D02-180A
236	Fitting, Connector	3	71009815
237	Hose* (bulk)	Specify Length	53245
238	Fitting, Hose End*	6	53954

* Refer to Dwg. MHP2221 on page 8.

• Recommended spares.

PILOT REMOTE PENDANT ASSEMBLY DRAWING AND PARTS LIST

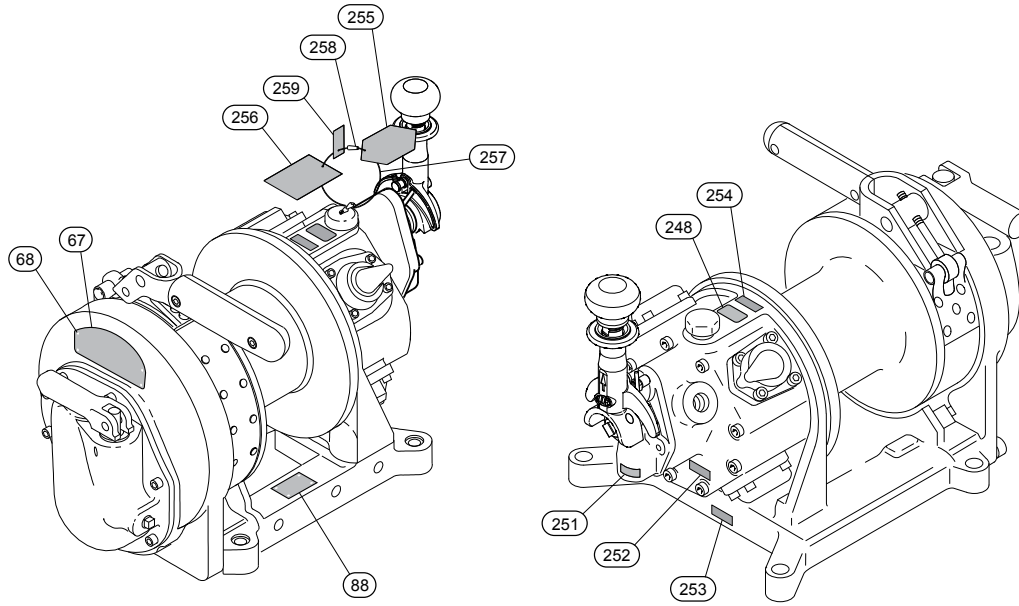


(Dwg. MHP2346)

Item No.	Description of Part	Total Qty	Part Number
353	Pendant Assembly	1	PHS2E-U
348	Fitting, Adapter	3	71048268
440	Lifting Eye	1	64222332
• 443	'O' Ring	2	58209229
444	Plug	2	65107741
445	Spring	2	69128541
446	Ball	2	69401625
447	Pin	1	95790040
448	Setscrew	2	42008607
• 449	'O' Ring	2	58235329
451	Protector	2	95790107
452	Valve	2	95790104
453	Lever	2	95790122
454	Pendant Handle	1	Order Item 353
455	Setscrew	3	71078158
456	Label Kit	1	95790111
457	Exhaust Washer	1	67600303
458	Retainer Ring	1	47713030
470	Plug	1	65129541

- Recommended spare for one winch, 2 years of normal operation.
PHS2E-U includes items 440, 443-449, 451-458 and 470

LABEL LOCATIONS DRAWING AND PARTS LIST

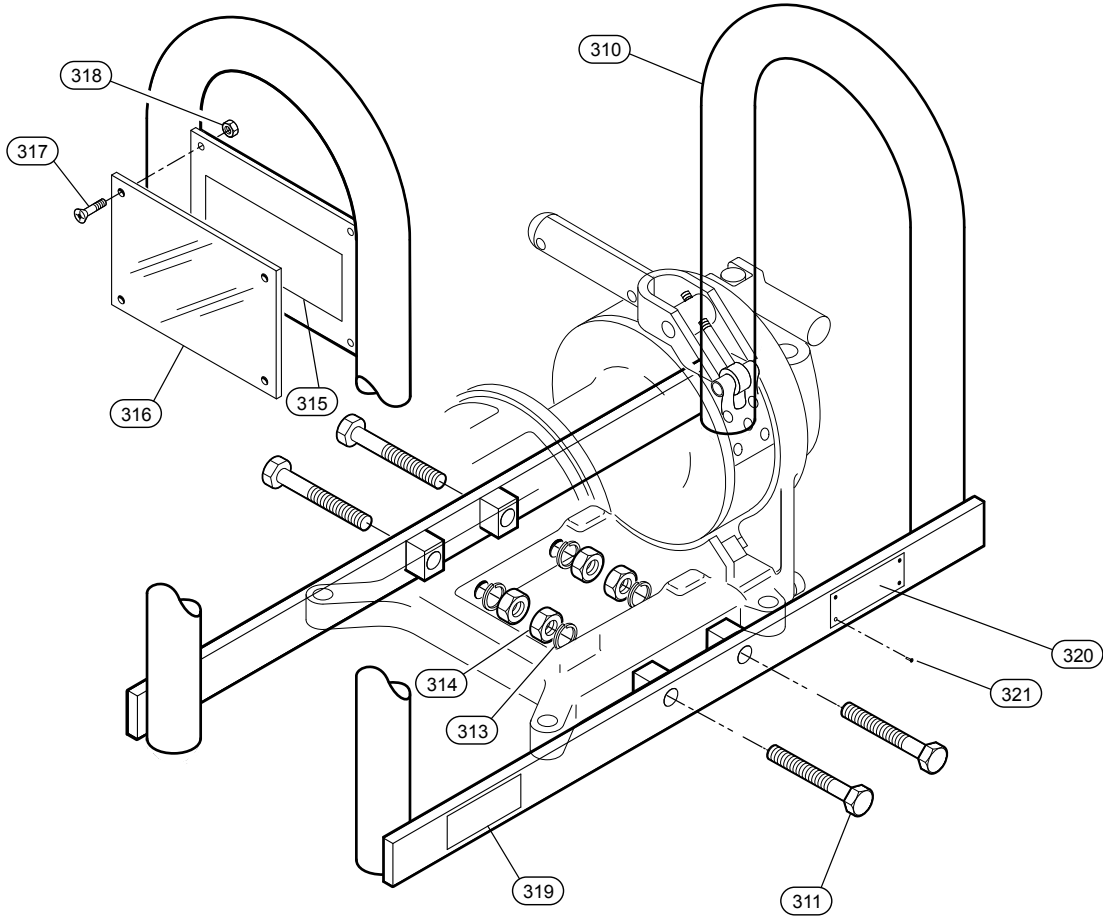


(Dwg. MHP2223)

Item No.	Description of Part	Total Qty	Part Number
40	Tags and Labels (Std. Winch)	1	Contact Factory
	Tags and Labels (BU7AAB/PT)		
67	Nameplate *	1	
68	Rivet	4	71028849
88	Label, Warning 'Do Not weld'	1	71270813
248	Label, Throttle Direction	1	71352777
251	Label, Exhaust	1	71042196
252	Label, Oil Level	1	71043616
253	Label, Oil Drain	1	71042188
254	Label, Oil Fill	1	71042204
255	Tag, Aftermarket	1	71455455
256	Tag, Warning	1	29452
257	Wire Tie	1	71410559
258	Sleeve	1	71410542
259	Tag, Check Oil Level	1	71107148

* Provide winch model and serial numbers

CONSTRUCTION CAGE DRAWING AND PARTS LIST



(Dwg. MHP2279)

Item No.	Description of Part	Total Qty	Part Number
308	Construction Cage Assembly (winch with no drum guard)	1	CC-BU7A
	Construction Cage Assembly (winch with drum guard)		CC-BU7A-G
	Construction Cage Assembly (PTAB winch with no drum guard)		CC-BU7APTAB
	Construction Cage Assembly (PTAB winch with drum guard)		CC-BU7APTAB-G
310	Cage (winch with no drum guard)	1	27398G
	Cage (winch with drum guard)		27398-1G
	Cage (PTAB winch with no drum guard)		382-34248G
	Cage (PTAB winch with drum guard)		382-34248-1G
311	Capscrew	4	51876
313	Lockwasher	4	50181
314	Nut	4	50171
315	Label, Specifications	1	71398556
316	Plexiglass Cover	1	27427
317	Screw	4	71359129
318	Nut	4	50852
319	Label, Warning	1	71359160
320	Nameplate	1	71359392
321	Rivet	4	71028849

WINCH UPGRADES

BU7A-A516 Crankshaft Assembly

On **BU7A** winches crankshaft BU7A-A516 has been redesigned to include the pinion as part of the shaft. The pinion is now machined as an integral part of the crankshaft, thus eliminating the old style crankshaft, motor pinion (BU-319), lockwasher (F-58) and motor pinion screw (BU-20).
 Order a new Crankshaft Assembly by specifying the following part number and communication number.
 Old-style parts such as the Motor Pinion (BU-319), Lockwasher (F-58) and Motor Screw (BU-20) are no longer available as spares. Order Crankshaft Assembly BU7A-A516A.

Description of Part	Part Number
Crankshaft Assembly	BU7A-A516A

ADDITIONAL REFERENCE MATERIAL

Description of Part	Part Number
BU7A Manual, CE Version (10 languages)	MHD56094
Brake Lining Replacement Procedures	MHD56142
Replacing Rotary Valve and Reverse Valve Bushings in BU7A Winches	MHD56154
Ball Valve Installation Instructions	MHD56261

WARRANTY

Ingersoll Rand Company warrants to the original user its Hoists and Winches (Products) to be free of defects in material and workmanship for a period of one year from the date of purchase. **Ingersoll Rand** will repair, without cost, any Product found to be defective, including parts and labor charges, or at its option, will replace such Products or refund the purchase price less a reasonable allowance for depreciation, in exchange for the Product. Repairs or replacements are warranted for the remainder of the original warranty period.

If any Product proves defective within its original one year warranty period, it should be returned to any Authorized Hoist and Winch Service Distributor, transportation prepaid with proof of purchase or warranty card.

This warranty does not apply to Products which **Ingersoll Rand** has determined to have been misused or abused, improperly maintained by the user, or where the malfunction or defect can be attributed to the use of non-genuine **Ingersoll Rand** parts.

Ingersoll Rand makes no other warranty, and all implied warranties including any warranty of merchantability or fitness for a particular purpose are limited to the duration of the expressed warranty period as set forth above. Ingersoll Rand maximum liability is limited to the purchase price of the Product and in no event shall Ingersoll Rand be liable for any consequential, indirect, incidental, or special damages of any nature rising from the sale or use of the Product, whether based on contract, tort, or otherwise.

Note: Some states do not allow limitations on incidental or consequential damages or how long an implied warranty lasts so that the above limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

IMPORTANT NOTICE

It is our policy to promote safe delivery of all orders.

This shipment has been thoroughly checked, packed and inspected before leaving our plant and receipt for it in good condition has been received from the carrier. Any loss or damage which occurs to this shipment while en route is not due to any action or conduct of the manufacturer.

VISIBLE LOSS OR DAMAGE

If any of the goods called for on the bill of lading or express receipt are damaged or the quantity is short, do not accept them until the freight or express agent makes an appropriate notation on your freight bill or express receipt.

CONCEALED LOSS OR DAMAGE

When a shipment has been delivered to you in apparent good condition, but upon opening the crate or container, loss or damage has taken place while in transit, notify the carrier's agent immediately.

DAMAGE CLAIMS

You must file claims for damage with the carrier. It is the transportation company's responsibility to reimburse you for repair or replacement of goods damaged in shipment. Claims for loss or damage in shipment must not be deducted from the **Ingersoll Rand** invoice, nor should payment of **Ingersoll Rand** invoice be withheld awaiting adjustment of such claims as the carrier guarantees safe delivery.

You may return products damaged in shipment to us for repair, which services will be for your account and form your basis for claim against the carrier.

