



# Technical Manual

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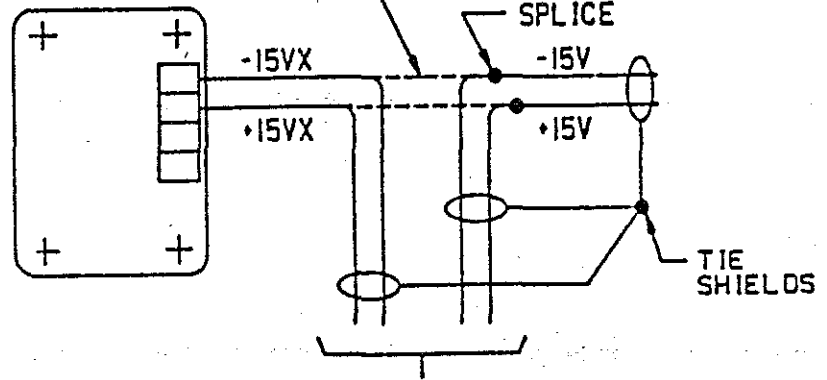
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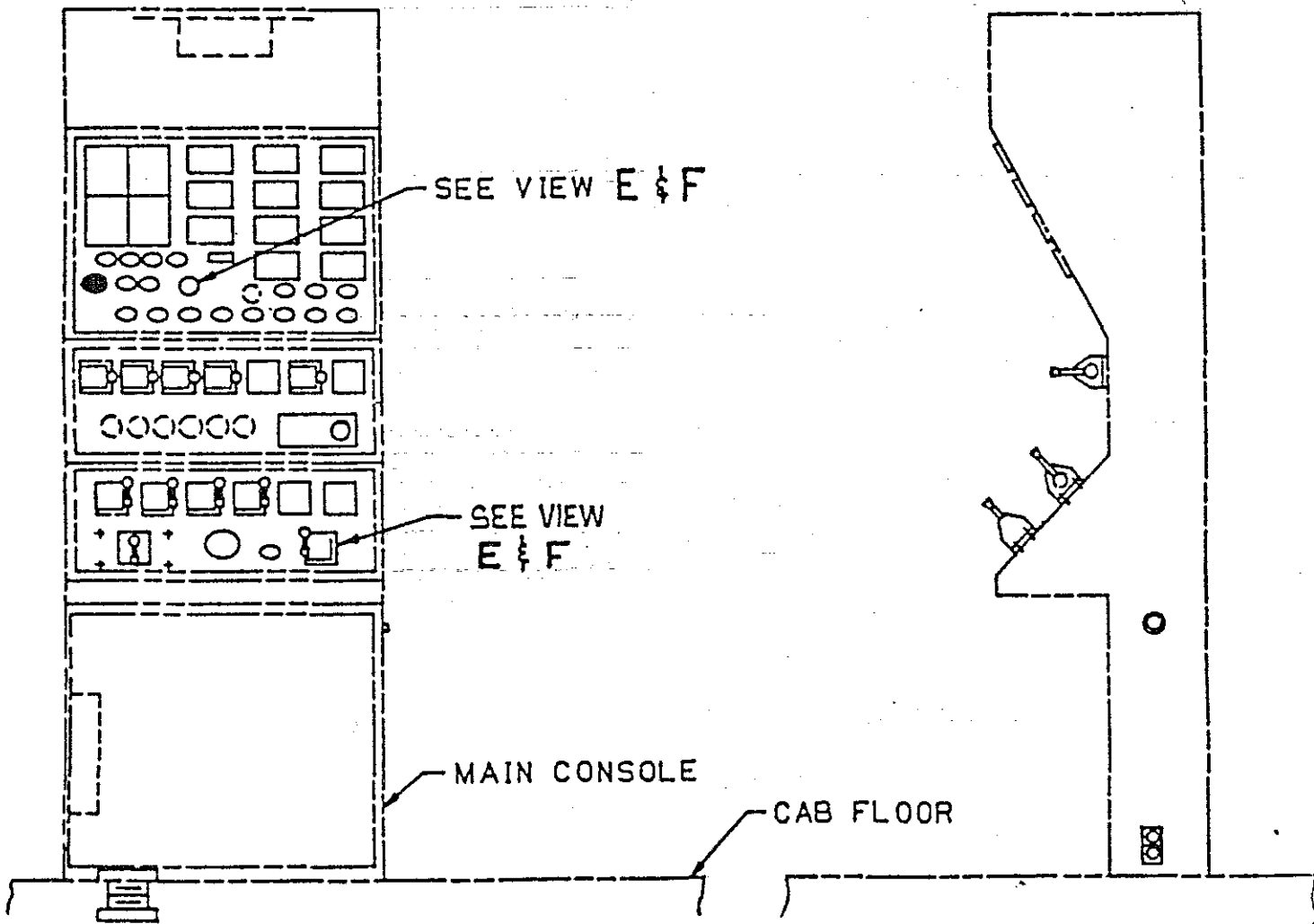
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BOTTOM VIEW OF  
HOIST/PULL DOWN  
CONTROLLER



TO DRILL/STANDBY/  
PROPEL SELECTOR  
SWITCH

VIEW F



SIL-28-86

SEPTEMBER 30, 1986

IMPROVED RETENTION OF GEAR ON INTERMEDIATE SHAFT  
IN SWING GEAR CASE ASSEMBLIES ON SOME  
MODEL 191-M AND ALL 192-M MINING SHOVELS  
AND ON ALL 195-M CRAWLER MOUNTED DRAGLINES

This letter pertains to swing gear case assemblies having part numbers 154G247, 154G247A, 154G247B, 154G247C, 154G247D, 154G247E, 154G247F, 361G42, 292459-5, 409076-4, and 482609-4.

Some gear cases in operation have experienced failure of the bolts that retain the gear on the top of the intermediate shaft by a lock plate or retainer. These bolt failures are attributed to the "oil canning" effect between the retainer plate and the top of the intermediate shaft (see included Sketch 1).

Our recommended solution to avoid this failure is to:

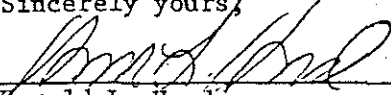
- eliminate the gap between the top of the shaft and the retainer.
- replace the existing .69 inch (17.5 mm) thick retainer plate with one that is over 2.5 times thicker.
- replace the existing 4 retainer bolts with ones of an improved grade and add a flat washer to each for improved locking.

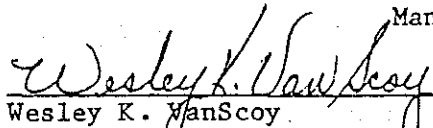
A bill of materials, including drawings of the parts required, for this improved retention, as well as an installation procedure, is included with this letter. The parts required are available from the Dresser Marion Division. Please contact the local Dresser distributor or the Service Products Department here, phone 614: 383-5211, for a quote. Identify them with the part numbers provided in the bill of materials.

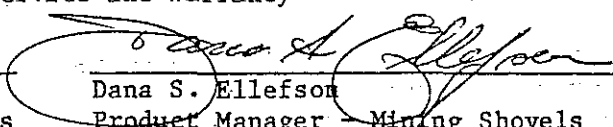
You should install this improvement to the swing gear cases on your machine(s) as soon as possible to avoid the chance of major damage occurring to the case contents if a bolt fails and happens to go thru gear mesh while operating.

We urge you to contact us for further assistance. Please get in touch with the local Dresser distributor, our field representative, or contact the Service Department here direct, phone 614: 383-5211.

Sincerely yours,

  
Harold L. Hord  
Manager - Service and Warranty

  
Wesley K. VanScoy  
Product Manager - Engineered Systems

  
Dana S. Ellefson  
Product Manager - Mining Shovels

PRODUCT IMPROVEMENT/INFORMATION  
LETTER INDEX

<u>NO.</u>	<u>DATE OF ISSUE</u>	<u>TITLE</u>	<u>MACHINES AFFECTED</u>
1	Feb. 16, 1976	Mechanical Propel Control	M4/M5
2	Feb. 16, 1976	Rail Stops	8200/8900
3	March 25, 1976	Cab Window	7500
4	April 2, 1976	Gantry Safety Cable	5760/5761
5	May 25, 1976	Quick Release Wedge Assy.	All
6	June 6, 1976	Crawler Roller and Bracket	M4/M5
7	June 30, 1976	Boom Support Ropes	191-M
8	July 8, 1976	Overhead Crane Locks	Stripping Shovels
9	Oct. 1, 1976	180 Swing Gear Cases	180 Series
10	Oct. 29, 1976	Dual Mounted Tapered Roller Bearings	All
11	Nov. 15, 1976	Roller and Ball Bearings	All
12	July 5, 1977	Hoist & Drag Drum Limit Switches	Draglines & Stripping Shovels
13	July 13, 1977	Propel Drive Chain-Repair Link	180 Series
14	March 21, 1978	Improved Dipper Door Hinge Pin	192-M 201-M
15	July 7, 1978	Auto Lube Control Panel "Automatic Lube Transfer Valve"	Stripping Shovels & Walking Draglines using Groups 359G10
16	Aug. 4, 1978	Air Operated Propel Brake and Steering	151-M's using 113G46B
17	April 15, 1980	Disc Brake for Crowd and Swing Motions	Mining Shovels (except 151-M crowd) Crawler Mounted Draglines (swing only)
18	May 27, 1980	Marion LRT-24 Air Conditioner	All
19	June 26, 1980	Horizontal Crowd Motor Mounting Arrangement	201-M/192-M

DIRECT MECHANICAL CONTROL/MAIN HYDRAULIC PUMP LEVER

TYPE M-4/M-5 DRILLS

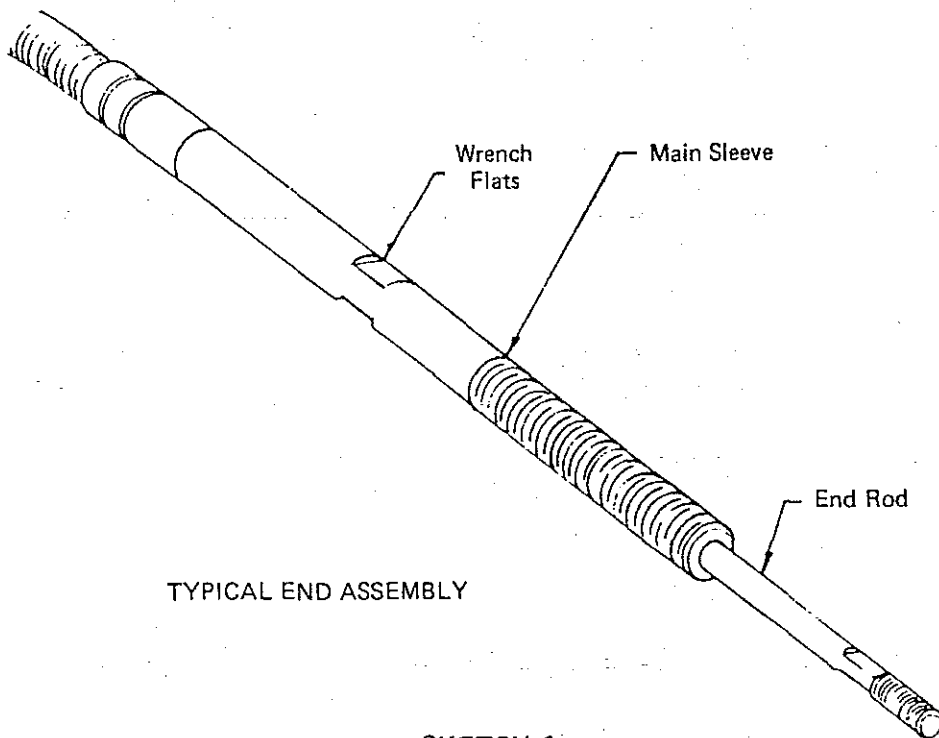
The PROPEL CONTROL CABLE is a direct link to the pumps for control crawlers during the propel mode.

**INSTALLING PROCEDURE FOR PROPEL CONTROL CABLE**—First, (before uncoiling the control) check that propel control number and identification appears in the control. All controls are marked.

Uncoil the control as shown in sketch 1. Once control is laid out straight, straighten the ribbon as shown in sketch 2. This is important to insure control is not helixed prior to installation.

Visually check the entire control, look at parts for cracks, abrasions, gauges, wear or other damage. Check also for excessive radial clearance and end play.

With a completely straightened control, stroke the end rod by hand. Check both the load and required stroke. The end rod should stroke freely without binding through out the full length of travel. The stroke length should be as required for the control in a straight position. If loads appear excessively high and above the stated ones on table 1 or if during stroking any erratic or increased loading occurs, recheck control for straightness and damage over the entire length. If this check shows control straight and undamaged, but erratic or increased loads remain, do not install this control.



PRODUCT IMPROVEMENT LETTER NO. 3 - Continued

Page -2-

It is estimated the existing arrangement may be removed and the new replacement kit applied to an operator station in 6-8 manhours. Installation instructions are being attached for further clarification and possible future use.

If you desire additional details concerning the mechanical aspects of the arrangement or desire assistance in actually making the installation, please contact your local Marion service or parts representative.

RMB/dc

Attachment

# MARION POWER SHOVEL COMPANY, INC.



617 WEST CENTER STREET

POST OFFICE BOX 505

MARION, OHIO 43302

TELEPHONE 614/383-5211  
 CABLE: MARIONSHOV  
 TELEX: 24-5307  
 TWX: 8104872772

## PRODUCT IMPROVEMENT LETTER NO. 6

### M4/M5 CRAWLER ROLLER AND BRACKET

To eliminate slapping and improve crawler belt wear, a bushed crawler roller and bracket assembly is now available for installation on your M4/M5 drills.

Presently, your drills incorporate wear plates on the front axle.

There have been cases where owners have failed to replace these plates when worn, and the crawler shoes then wear into the front axle.

The new bushed roller assembly will provide added support to the crawler belt, thus improving the life of the shoes, connecting pins, and drive sprocket.

So that you may better understand the improvement, please note the attached crawler side frame sketch.

This new crawler roller and bracket assembly may be ordered through the Marion Parts Department as an improvement for your drill. Please order the following for each drill:

2 - Group R-6602 crawler roller and bracket assemblies

(one for each crawler side frame.) Price \$1,567.00

each, (Total price per drill - \$3,134.00) F.O.B.

Marion, Ohio; delivery 18-20 weeks from date of

receipt of order.

PRODUCT IMPROVEMENT LETTER NO. 8 MAILED TO THE FOLLOWING:

Robertson & Associates	Midland Coal Company
Mr. Russel Sampson	Mr. B. E. Bhear
Mine Superintendent	Mine Superintendent
Fabius Mine, Box 625	Mecco Mine
Stevenson, AL 35772	Victoria, IL 61485

Amax Coal Company	Midland Coal Company
Mr. Bill Kirchner	Mr. Les Lowe
Mine Superintendent	Mine Superintendent
Wright Mine, P.O. Box 89	Elm Mine, P.O. Box 8
Boonville, IN 47601	Trivoli, IL 61569

Amax Coal Company	Old Ben Coal, Inc.
Mr. J. E. Reese	Mr. John Kerr
Mine Superintendent	Mine Superintendent
Sun Spot Mine	Old Ben #1 Mine, Box 140 RR #2
Vermont, IL 61484	Oakland City, IN 47560

Amax Coal Company	Peabody Coal Company
Mr. J. R. Lovell	Mr. George Snider
Mine Superintendent	Mine Superintendent
Ayrgem Mine, Box 310	Squaw Creek Mine
Central City, KY 42330	Booneville, IN 47601

Consolidation Coal Company	Peabody Coal Company
Mr. Don Del Bosco	Mr. G. W. Jones
Mine Superintendent	Mine Superintendent
Burning Star #2	Hawthorn Mine, Rt. #2
Pinckneyville, IL 62274	Carlisle, IN 47838

Gibraltar Coal Corp.	Peabody Coal Company
Mr. D. H. Ashby	Mr. Leonard Hughes
Mine Superintendent	Mine Superintendent
Gibraltar Mine, Box 510	Lynnville Mine
Central City, KY 42330	Lynnville, IN 47619

Central Ohio Coal Company	Island Creek Coal Company
Mr. Lynn Henderson	Mine Superintendent
Muskingum Mine, P.O. Box 98	Northern Division
Cumberland, OH 43732	Drawer 75
	Craigsville, WV 26205

# MARION POWER SHOVEL COMPANY, INC.



617 WEST CENTER STREET  
POST OFFICE BOX 505  
MARION, OHIO 43302

TELEPHONE 614/383-5211  
CABLE MARIONSHOV  
TELEX:  
GENERAL OFFICES - 24-5307  
PRODUCT ENGINEERING CENTER - 24-5321  
SERVICE PRODUCTS DIVISION - 24-6691  
TWX: 8104872772

JANUARY 5, 1977

## PRODUCT IMPROVEMENT LETTER NO. 10

### DUAL MOUNTED TAPERED ROLLER BEARINGS

There have been cases where customers have improperly ground the spacer located between the two bearing cones of dual mounted tapered roller bearings. Improper machining of this spacer causes misalignment and, practically in every case, a premature bearing failure.

Marion has developed a technique which eliminates the need for machining. In such an arrangement, the bearing cups and cones are separated by spacers which are preground and machined at the factory. These bearings are then installed as matched sets with no grinding required.

To familiarize you with the current and proposed arrangement, please note the enclosed sketches outlining the installation procedure for both. You will note that not only does the proposed arrangement minimize the possibility of assembly errors, but also reduces installation time.

Dual mounted tapered roller bearings may be found at several locations on your machine. To acquaint you with these locations, please note enclosed another attachment which describes the more common application.

If you are interested in this new matched bearing at any of the locations noted, and wish to obtain a quotation, please contact your Marion field sales parts representative. All he needs to know is the machine type, its serial number, and the bearing application.

J. L. Whaley - R. M. Buchanan

RMB/rb

Attachments

## MARION POWER SHOVEL INC.

BI115484

PRODUCT IMPROVEMENT LETTER NO. 11TAPERED BEARINGS (CONT)

<u>P-CODE NUMBER</u>	<u>PART NUMBER &amp; DESCRIPTION</u>	<u>TYPES USED ON</u>
090767-7	BRG 2EE435102-435165D W/XIS435	
191160-1	BRG 270TDO812 TAPER ROLLER	
013699-9	BRG 3320B CUP	
913701-7	BRG 3384 TIMKEN CONE	
042674-1	BRG 36990-36920 TIMKEN TYPE TS	0035, 0043
151351-6	BRG 383A385	
040324-5	BRG 4-3/8 SPACER FOR EE420801	5761, 5760
042702-1	BRG 48120 CUP TIMKEN	0035
042703-9	BRG 48190 CONE TIMKEN	0035
087620-8	BRG 482-472 TIMKEN	
012545-8	BRG 48220 CUP	
135174-5	BRG 48282-48220	0192, 0191, 0182, 0201
131974-4	BRG 48620-48685	
042700-4	BRG 52400 CONE	0035
042701-2	BRG 52618 CUP	0035
042656-3	BRG 544090-544118	0093, 0111
013747-2	BRG 55200 CONE TIMKEN	
013749-9	BRG 55437 CUP TIMKEN	
133799-8	BRG 563 CUP	
103242-9	BRG 566-563 TYPE TS	M4, M5
012487-7	BRG 567 CONE TIMKEN	
042713-6	BRG 572 CUP	0035
013675-1	BRG 575 CONE TIMKEN	0093
037408-3	BRG 580 CONE	0035
910985-4	BRG 581 CONE	

MARION POWER SHOVEL INC.

BI115484

PRODUCT IMPROVEMENT LETTER NO. 11

BALL BEARINGS (CONT)

<u>P-CODE NUMBER</u>	<u>PART NUMBER &amp; DESCRIPTION</u>	<u>TYPES USED ON</u>
151011-8	BRG 319SF	
013667-1	BRG 319SFT12	0111
108255-8	BRG 32P40 GS ROLL END	
042718-7	BRG 320MF MRC	0111
043581-3	BRG 320S	0191
010873-1	BRG 3214LY1A ND	
037587-0	BRG 3214X1A ND	0191, 0151
043582-1	BRG 322M MRC	0065, 0362
181922-4	BRG 322S	0191
178602-4	BRG 324W -MRC324R-	
103338-7	BRG 40BC03 BALL	
056959-3	BRG 521SK MRC 5215 FAFNIR	0093, 0101
012763-9	BRG 5218K	0093
037591-8	BRG 5220XY1A	
057638-7	BRG 5309F MRC	
013715-4	BRG 5310	
098025-1	BRG 5311 ND	0111
013717-1	BRG 5312X1A	
038271-0	BRG 5313	
038279-5	BRG 5314 NEW DEPARTURE	0035
038280-9	BRG 5314F	0151
035218-7	BRG 5322 FAFNIR OR MRC	0191
042768-3	BRG 5513XY1A	0035
012521-1	BRG 5514L, 5214KF OR P5214WD	
038292-2	BRG 5522XY1A OR 5222 KF MRC	0111, 0151

MARION POWER SHOVEL INC.

BI115484

PRODUCT IMPROVEMENT LETTER NO. 11

SPHERICAL BEARINGS (CONT)

<u>P-CODE NUMBER</u>	<u>PART NUMBER &amp; DESCRIPTION</u>	<u>TYPES USED ON</u>
037383-4	BRG 22222C SKF	0065
036809-1	BRG 22224	7800, 5323, 5561
015549-7	BRG 22318	
118187-4	BRG 22352 SPHERICAL	7820
098100-1	BRG 230-710 CAM-W33C2 SPHR SKF	8000, 8050, 8200
108248-5	BRG 230-800CAM-W33-C2 ROLLER	
042725-0	BRG 23028 SKF OR TORRINGTON	0111
125623-8	BRG 23036C 23036CW33 SKF	0181, 0182, 0183, 0184, 0191
057616-6	BRG 23040-MCW33 SKF	M4, 0182, 0183, M5, 0181 0184
037578-1	BRG 23060	
096395-0	BRG 23064C SPHERICAL SKF	5960
108186-1	BRG 23164CA/C3 SKF OR 320SD31	7820
108249-3	BRG 23168CA-W33 OR 340SD31W33F	8000, 8050, 8200
095351-2	BRG 23224A	
021112-5	BRG 23228C	0111
124053-6	BRG 240-800 CAM C2-W33 SKF	8750, 8950, 8050
038549-2	BRG 240SD32 W/SP 10IN BORE	
133811-1	BRG 24040CYW/33SKF	
108187-0	BRG 24056CA/C3 USE 165783	7820
118186-6	BRG 24164CA SPHERICAL	7820
108144-6	BRG 260SD22 ROLLER TORRINGTON	7820
013404-0	BRG 260SD30	5761
038591-3	BRG 260SD32 OR 23252W33	0291
322915-7	BRG 260SD39 SPH ROLLER TORR	
103204-6	BRG 280SD30W20W46F1	

Mr. Lonnie Vaughn  
Master Mechanic  
Peabody Coal Company  
Lee-Veer Mine - Box 465  
Macon, MO 63552

Mr. Robert Robinson  
Maintenance Supervisor  
Texasgulf, Inc.  
P.O. Box 48  
Aurora, NC 27806

Mr. Willard L. Cornn  
Master Mechanic  
Amax Coal Company  
Northern Division  
Sun Spot Mine  
Vermont, IL 61484

Mr. Willard L. Morrell  
Oper. Manager  
Robinson & Associates, Inc.  
1620 Commerce Union Bank Bldg.  
Chattanooga, TN 37402

Mr. Gordan A. Babcock  
Maintenance Superintendent  
Consolidation Coal Co.  
Midwest Div. - Norris Mine  
Norris, IL 61553

Mr. Red McCoy  
Master Mechanic  
Calgary Power Ltd.  
Highvale Mine  
P.O. Box 30  
Seba Beach, Alta., Canada

Mr. Walt Whitcomb  
Master Mechanic  
Arch Coal Company  
P.O. Box 625  
Tevenson, AL 35772

Mr. Ron Gray  
Mgr. of Engineering  
Syncrude Canada Ltd.  
9915 - 108 Street  
Edmonton, Alta., Canada

Mr. Don Smith  
Master Mechanic  
Arch Mineral Corp. Mine  
Walker Fayette Mine - Box 1688  
Jasper, AL 35501

Mr. Jim Lewis  
Resident Engineer  
Consolidation Coal Company  
5889 S. Syracuse Circle  
Englewood, CO 80110

Mr. Bourbon Sides  
Chief Engineer  
Bank Head Mining Co., Inc.  
P.O. Box 1629  
Jasper, AL 35501

Mr. R. W. Adams, President  
Energy Fuels Corporation  
3 Park Central  
1515 Arapahoe - Suite 445  
Denver, CO 80202

Mr. J. H. Andrews  
Manager Maintenance  
International Minerals & Chem. Co.  
P.O. Box 867  
Bartow, FL 33830

Mr. Tony Longacre  
Gen. Main. Foreman  
Utah International, Inc.  
Navajo Mine - P.O. Box 155  
Fruitland, NM 87416

Mr. Phillip Holz  
Chief Mining Engineer  
North Carolina Phosphate Co.  
Seaboard Off. Bldg. - P.O. Box 32  
Washington, NC 27889

Mr. Otis English, Superintendent  
Peabody Coal Company  
Box 140  
Chelsea, OK 74016

**MARION POWER SHOVEL DIVISION ■ DRESSER INDUSTRIES, INC.**

July 7, 1978

PRODUCT IMPROVEMENT LETTER 15AUTO LUBE CONTROL PANEL"AUTOMATIC LUBE TRANSFER VALVE"

Marion Dresser Engineering's design activities include a constant search for alternate vendors, vendors which can offer advantages over those vendors listed in the drawing bill of material.

One such case is Marion Dresser machines using dual line automatic lubricating control panel, groups 359G10 and 359G10A.

Marion Dresser Engineering has developed a kit which includes a new 4 way valve. A valve which is less expensive than the one currently listed, may be purchased from stock and is easier to replace and maintain. The control panel is simplified also since the new valve is easily changed by removing only 4 bolts.

The new arrangement (kit R6708) can be adapted to your 359G10 or 359G10A control panel.



BRAKE -

ITEM NO.	NAME OF PART	QUAN. REQ.
1	Mounting Flange	1
2	Stud	6
3	Clamp Tube	6
4	Disc	1
5	Friction Disc	2
6	Flat Head Screw	18
7	Pressure Plate	1
8	Spring Housing	1
9	Lock Nut	6
10	Outer Clamp Ring	1
11	Diaphragm	1
12	End Plate	1
13	Inner Clamp Ring	1
14	Hex Head Screw	3
15	Lock Washer	21
16	Hex Head Screw	6
17	Lock Washer	6
18	Spring Retainer Plate	18
19	Spring	27
21	Hex Head Screw	18
22	Gear	1
26	Name Plate	1
27	Self Tap Screw	4
28	Shield	1
29	Hex Head Screw	2
30	Lock Washer	2
31	Hex Nut	2
35	Warning Decal	1
36	Socket Head Cap Screw	4
37	Lock Washer	4
38	Support Strap (Short)	1
39	Spring	1
40	Reworked Screw	1
41	Hex Jam Nut	1
42	Spring Retainer	2
43	Support Strap (Long)	1

INTER-DEPARTMENT CORRESPONDENCE  
(HOME OFFICE ONLY)

DATE October 23, 1981  
B1115484

FROM H. Clarke

TO Those listed:

SUBJECT

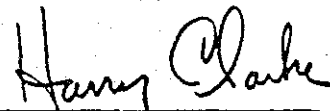
ADDITIONAL COPIES TO

RELEASE OF PRODUCT IMPROVEMENT/  
INFORMATION LETTER 21

T. Backus	T. Richards
R. Badour	T. Roberts
B. Barraclough	E. Sankey
G. Beckley	F. Sargent
<del>N. Castleberry</del>	L. Schaffer
R. Craig	G. Schultz
M. Ecker	J. Sheets
J. Ehle	E. Steidle
L. Fitch	D. Stout
C. Higgins	S. Wedertz
E. Hill	J. Whaley
R. Johnson	D. Wilcox
E. Jennings	D. Wilson
R. Mitton	R. Wilson
R. Posewitz	H. Zimbal

Attached is a copy of Product Improvement/Information Letter Number 21 "Improved Center Journal for 7400-7500 Walking Draglines". Please insert into your "P.I.L." file. Also attached is a new index page and a list showing the last known customer (or distributor) of the machine candidates. The locations for these machines are difficult to establish and are not listed.

By copy of this memo, all sales personnel are requested to contact the listed customers (or distributors) in their area and hopefully generate a sale. If any assistance is needed, please contact the writer.



Harry Clarke  
P.I.L. Coordinator

/se

## Attachments:

1. P.I.L. No. 21
2. Index page
3. Machine customer list

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INTER-DEPARTMENT CORRESPONDENCE  
(HOME OFFICE ONLY)

DATE June 16, 1982 15484

FROM H. Clarke

TO Those listed:

SUBJECT

ADDITIONAL COPIES TO

RELEASE OF P.I.L. 23

"DISC BRAKE BROCHURE"

R. Badour	T. Richards
B. Barraclough	T. Roberts
G. Beckley	E. Sankey
<del>N. G. Stebbins</del>	L. Schaffer
R. Craig	G. Schultz
M. Ecker	J. Sertich
D. Evans	J. Sheets
L. Fitch	T. Smith
C. Higgins	S. Wedertz
E. Hill	J. Whaley
H. Hord	D. Wilcox
K. Iler	D. Wilson
E. Jennings	R. Wilson
R. Johnson	H. Zimbal
R. Posewitz	

Please find enclosed your copy of the above brochure. Also included is a new index sheet.

If you have any questions or desire additional information, please do not hesitate to contact me.

Harry Clarke  
P.I.L. Coordinator

SW

Encl.

P.S. It does not say so in the brochure, but we are also pushing disc brakes for walking drag lines. Talk to your customers that have walking drag lines also.

Thanks

Harry Clarke

PRODUCT IMPROVEMENT/INFORMATION  
LETTER NO. 24

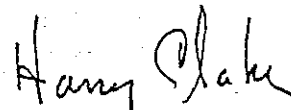
November 15, 1982

"HOIST AND DRAG FRICTION CLUTCH BAND ASSEMBLY  
FOR 184M CRAWLER MOUNTED DRAGLINES"

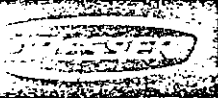
This is to announce a new improved hoist and drag clutch band assembly for 184M crawler draglines. Features of the new assembly are shown on the attached drawing. Views A-A and B-B give close up detail.

- o Improved friction blocks. Blocks are made of longer wearing material. This cuts operating costs by lowering maintenance frequency. More system uptime gives increased machine production.
- o Tapped end pins. These pins assist in easier disassembly and reassembly for faster changeouts - lower maintenance costs.
- o Heavier end link connections. New design extends band life. This means fewer replacements over the life of the machine giving reduced parts and maintenance costs.

Part number 429959-1 is a direct replacement for existing 184M hoist and drag friction clutch band assemblies 59G208. Order your new improved assemblies now by contacting the Service Products Department (614) 383-5211 or contact your Area Parts Sales Representatives.



Harry Clarke  
Product Improvement/Information  
Letter Coordinator  
Service Products Center

**MARION****PRODUCT IMPROVEMENT  
& INFORMATION LETTER**

BI115484

NOTED

PRODUCT IMPROVEMENT LETTER

LETTER NO. 29

JANUARY 1984

MARION WALKING DRAGLINES

FEB 14 1984

V. L. Brown

This is a description of the procedure for weld reinforcement of T-section bulkheads which support the lower swing boss in the rotating frame of Marion walking draglines. The joints involved (see sketch) can fatigue crack between the flange of the T-section and the swing boss. Repair of any cracks found should be made immediately because the boss area supports the main rotating shaft bearing. The recommended procedure for repair and reinforcement is:

- o Weld repair the cracked area using established weld repair practices and standards.
- o Add gusset plates to the corners on each side of the T-section at the joint with the boss. Plates should be same thickness as original T-section materials. The attached sketch shows locations of gusset installation and recommended 6-inch (152mm) weld radii.
- o Where a 6-inch radius cannot be used it is recommended these welds be at least four times the thickness of the flange of the support. (See sketch). Blend the weld rod material into the adjacent structures to make a smooth transition.
- o Gusset plate installation requires full penetration weld technique. All welds must be blended into adjacent plates by grinding to give smooth transition for maximum stress distribution.

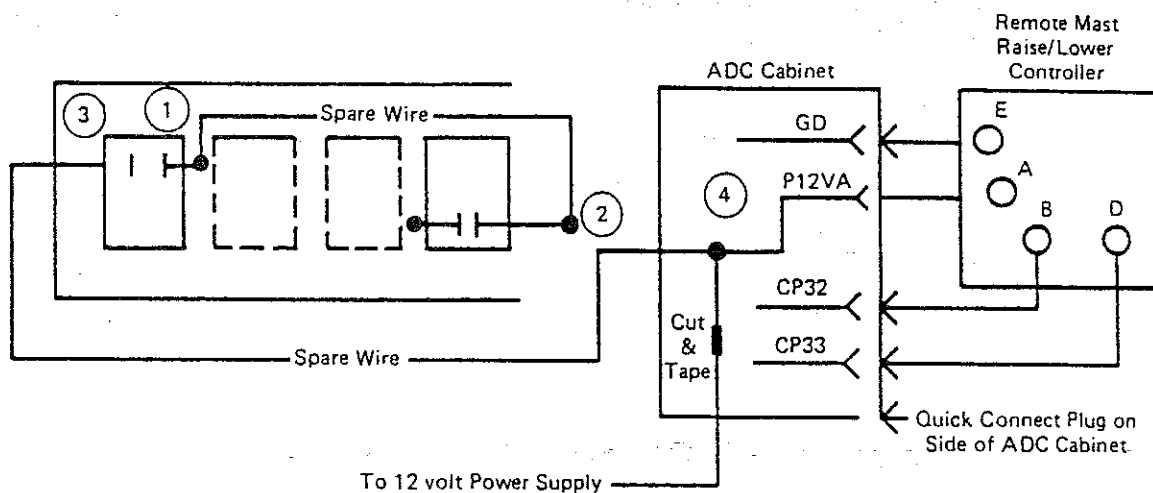
Assistance with weld repair procedure and installation of gussets is available from Marion technical service representatives. Contact Service Department, Marion, Ohio should you require assistance.

## M2/M3 MAST INTERLOCK INSTALLATION INSTRUCTIONS

Follow these instructions to install the M2/M3 electronic mast interlock circuit. Use the electrical diagram with the instructions provided. Contact the factory should you need assistance.

1. Locate the LLSR (lower limit switch relay) in the cab. This relay has a set of unused contacts.
2. Connect a jumper wire from P12V terminal in the propel relay (PR) to the unused set of contacts in the LLSR.
3. Connect another spare wire from the unused set of contacts in the LLSR to contacts indicated in the ADC (automatic drill control) cabinet.
4. At the quick disconnect plug for the remote mast raise/lower controller, locate and cut the wire going to the P12V terminal. Splice in the spare wire from the LLSR in step 3 and re-label this terminal P12VA. Tape the other end of the cut wire.

This completes the interlock installation. Now, the mast lower limit switch must be tripped before power can flow to the remote mast raise/lower controller.



DRESSER INDUSTRIES, INC. • MARION DIVISION  
PRODUCT IMPROVEMENT LETTER

PIL-37-86

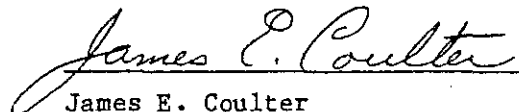
JULY 3, 1986

HOIST MOTOR EXTENSION SHAFT  
FOR SOME MODEL 181-M MINING SHOVELS

Shaft assembly 156G56B has combination pinion/shaft 338CF37 (P.C. 003370-7) assigned in its parts listing. An improved pinion/shaft is available for changeout in this assembly. This improved pinion/shaft is made from material that increases its minimum hardness over the 338CF37 pinion by 79 Brinell points. This added hardness has proven by experience to provide a longer service life when all other operating parameters are the same.

This improved shaft is identified as part number 079208-0: HERRINGBONE PINION 338CF37A. It has a list price F.O.B. shipping point of (US) \$3,971.00 and is a stocking item.

We recommend you order this pinion/shaft instead of the 338CF37 pinion/shaft for your future replacements. Contact your DRESSER distributor to place your order.



James E. Coulter

Manager - Service Products



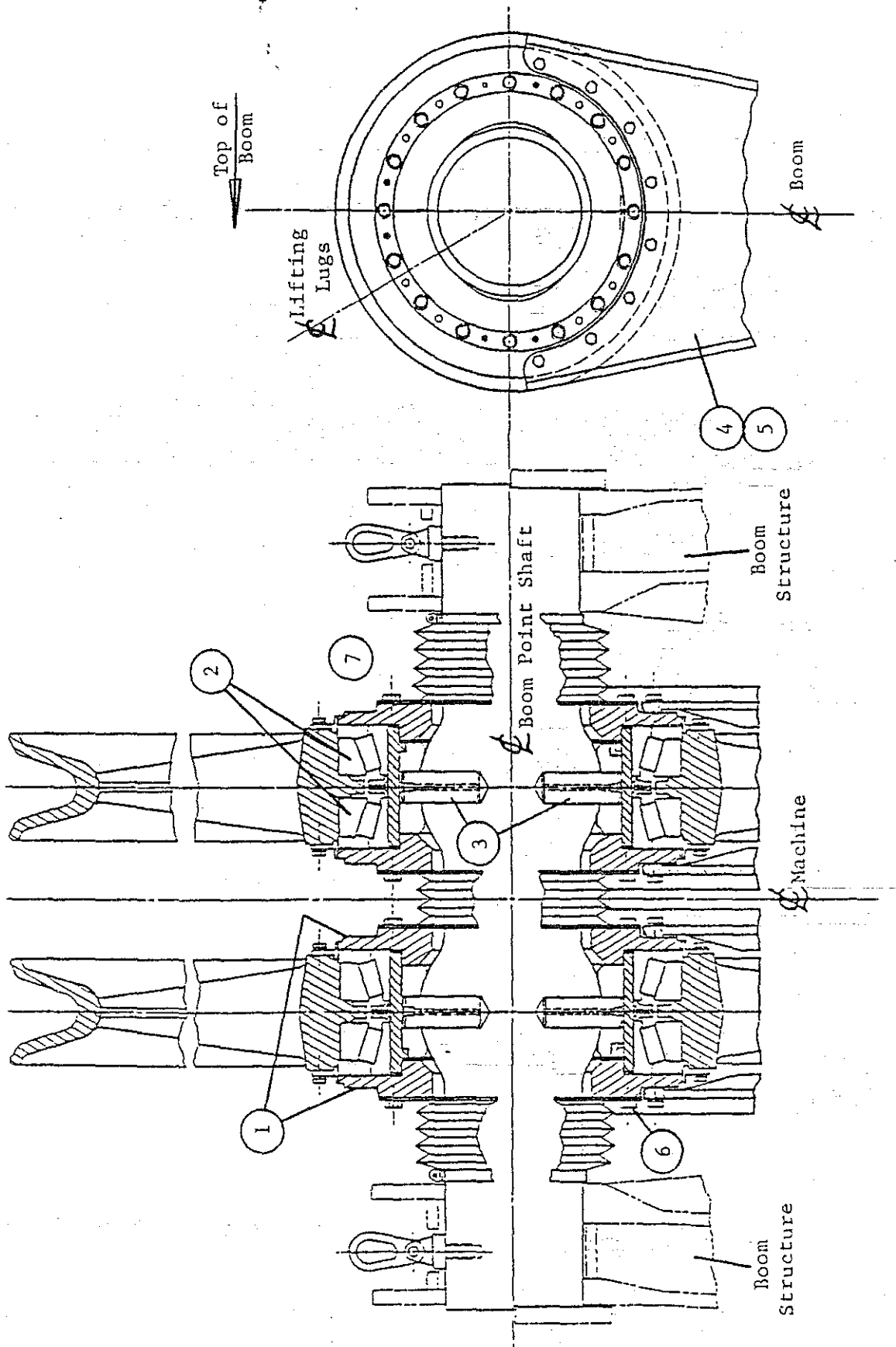
Dana S. Ellefson

Product Manager-Mining Shovels

hj

## List of Customers:

Amax Coal	S/N 23171	K-20120
Atlas Mining	S/N 23201	K-20126
Djurdjevik	S/N 23233	K-20130
Enoxy Coal	S/N 23186	K-20121
	S/N 23194	K-20122
	S/N 23221	K-20123
	S/N 23223	K-20127
P&M	S/N 23285	K-20131
	S/N 23286	K-20132
TKI	S/N 80036	K-S20139
	S/N 80037	K-S20140
	S/N 80038	K-S20141
	S/N 80039	K-S20142
	S/N 80040	K-S20143



PIL-46-88

MAY 31, 1988

DRILL STRING COUPLING (SHOCK-SUB) ASSEMBLY AT  
 ROTARY GEAR CASE IN MAST ON ALL  
 MODEL M-4, M-4B, AND M-5 BLAST HOLE DRILLS

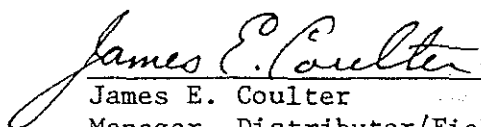
A new drill coupling (shock-sub) assembly is available as a retrofit kit to the rotary gearbox on your Dresser blast hole drill(s). The benefits of this design improvement over the original coupling are:

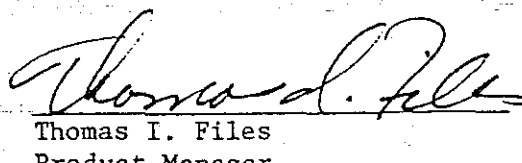
- INCREASED CUSHION PAD THICKNESS - protects gearcase better from shock loads.
- POSITIVE AIR PASSAGE SEAL - prevents discharge of drilling air from coupling when hoisting drill string.
- SPLIT COLLAR DESIGN - reduces quantity of bolts required and permits use of normal torquing methods for installation, thus simplifying maintenance.
- ELIMINATES "TIMING" OF COMPONENTS - stub shaft, drive ring, and output adapter no longer need to be "timed", thus simplifying assembly.

The design of this retrofit drill coupling (shock-sub) is the same as that used for the coupling on our Model M-2, M-3, and M-3B units. This design has been in operation since 1980 and has proven to be very reliable, very dependable, and very successful. This coupling design will be used on all future Model M-4, M-4B, and M-5 blast hole drills.

See the accompanying sketch on the reverse for a view of this product improvement. This retrofit kit is identified by part number 485757-7, R6902 SHOCK SUB ASS'Y CONVERSION. It is a direct replacement for the drill coupling on your drill(s) and fits the existing stub shaft in the rotary gear case.

We ask you to seriously consider replacing the existing drill coupling (shock-sub) assembly on your Dresser blast hole drill(s) with this new one at your earliest opportunity. Contact your local Dresser distributor or representative, or the Service Products Department here in Marion, 614:383-5211, for a quote.

  
 James E. Coulter  
 Manager, Distributor/Field Sales

  
 Thomas I. Files  
 Product Manager

P.I.L. 50  
ADDITIONAL SALES INFORMATION

THIS KIT HAS BEEN DEVELOPED TO REDUCE MACHINE DOWNTIME DUE TO THE REQUIRED WELD BUILD-UP AND REMACHINING AS THE PARTS BEGIN TO WEAR BEYOND THE ORIGINAL SPECIFICATIONS.

WE HAVE NOT MENTIONED THE FIRST INSTALLATION WILL REQUIRE MACHINING THE BORES OVERSIZED IN BOTH THE YOKE BLOCK FRAMES AND TRUNNION HOUSINGS.

HOWEVER, THE BEAUTY OF THIS KIT IS THE FACT THIS MACHINING WILL ONLY BE NECESSARY FOR THE INITIAL INSTALLATION AND ALL FUTURE MAINTENANCE BECOMES A SIMPLE BUSHING CHANGE.

THE BENEFIT WHICH SHOULD BE EMPHASIZED IS THE OVERALL REDUCTION IN OPERATING COST. THE REPLACEMENT COST OF YOKE BLOCKS AND OR TRUNNION HOUSINGS WILL BE EXTREMELY HIGHER THAN THE COST TO REPLACE BUSHINGS.

ATTACHED YOU WILL FIND A SKETCH WHICH WILL IDENTIFY THE ACTUAL LOCATION WHERE THIS KIT WILL BE UTILIZED.

JOHN DILDINE  
KANAWHA MINING CO., INC.  
HUGHES CREEK MINE  
P.O. BOX 4076  
CHARLESTON, WV 25304

CRAIG PAISLEY  
BRIDGER COAL CO.  
JIM BRIDGER MINE  
P.O. BOX 2066  
ROCK SPRINGS, WY 82901

GEORGE VAJDA  
CYPRUS YAMPA VALLEY COAL CO.  
COLORADO YAMPA STRIP MINE  
29586 ROUTT COUNTY ROAD 27  
JACK CREEK, CO 80467

JOHN DEBSKI  
BRIDGER COAL CO.  
JIM BRIDGER MINE  
P.O. BOX 2066  
ROCK SPRINGS, WY 82901

JAY CUPP  
CYPRUS YAMPA VALLEY COAL CO.  
COLORADO YAMPA STRIP MINE  
29588 ROUTT COUNTY ROAD 27  
JACK CREEK, CO 80467

NORA CHATERBACH  
BRIDGER COAL CO.  
JIM BRIDGER MINE  
P.O. BOX 2066  
ROCK SPRINGS, WY 82901

JAMES MITCHELL  
DRUMMOND COAL CO.  
SHORT CREEK MINE NO. 400  
STAR RT. 1650  
MULGA, AL 35118

J.R. KEY  
BRIDGER COAL CO.  
JIM BRIDGER MINE  
P.O. BOX 2066  
ROCK SPRINGS, WY 82901

PETER GRUEY  
DRUMMOND COAL CO.  
SHORT CREEK MINE NO. 400  
STAR RT. 1650  
MULGA, AL 35118

DAN SWETICH  
FALKIRK MINING CO.  
FALKIRK MINE  
P.O. BOX 1087  
UNDERWOOD, ND 58576

ROBERT REED  
DRUMMOND COAL CO.  
CEDRUM MINE  
P.O. BOX 89  
TOWNLEY, AL 35587

RICHARD ADSEKO  
FALKIRK MINING CO.  
FALKIRK MINE  
P.O. BOX 1087  
UNDERWOOD, ND 58576

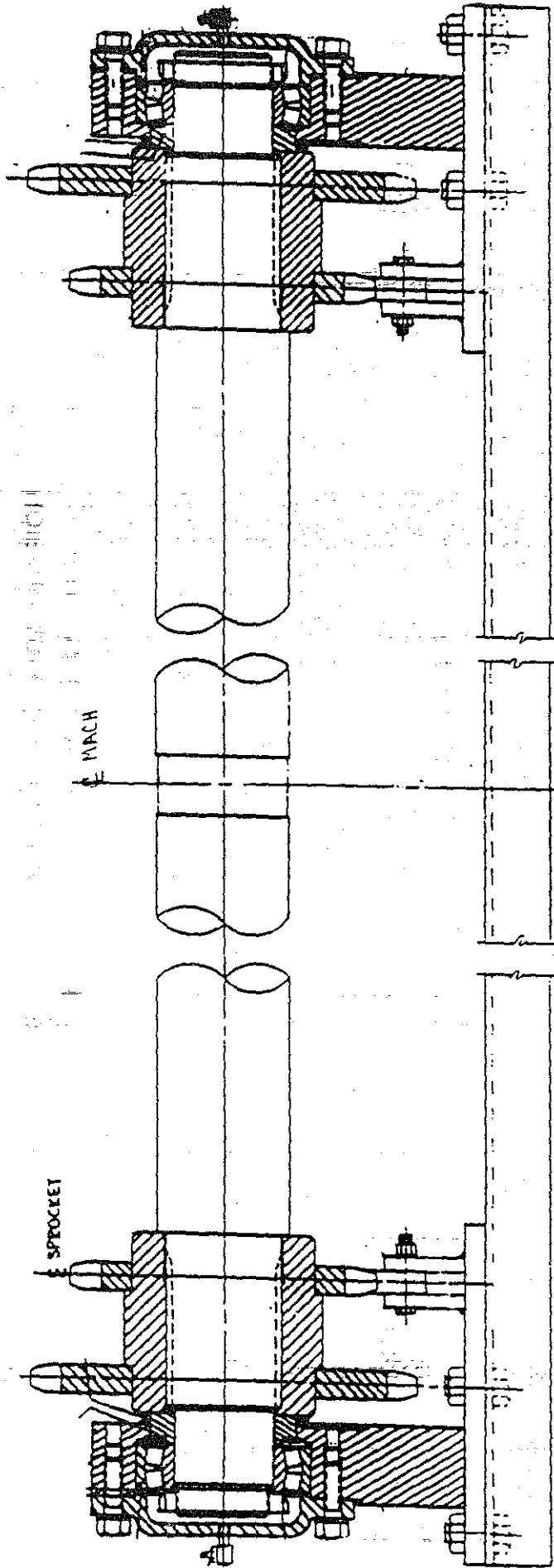
B. NIBLER  
DRUMMOND COAL CO.  
CEDRUM MINE  
P.O. BOX 89  
TOWNLEY, AL 35587

D.F. SCHMIGT  
FALKIRK MINING CO.  
FALKIRK MINE  
P.O. BOX 1087  
UNDERWOOD, ND 58576

F. CHESSMAN  
MOBIL MINING & MINERALS CO.  
BIG FOUR MINE  
P.O. BOX 508  
BRADLEY, FL 33835

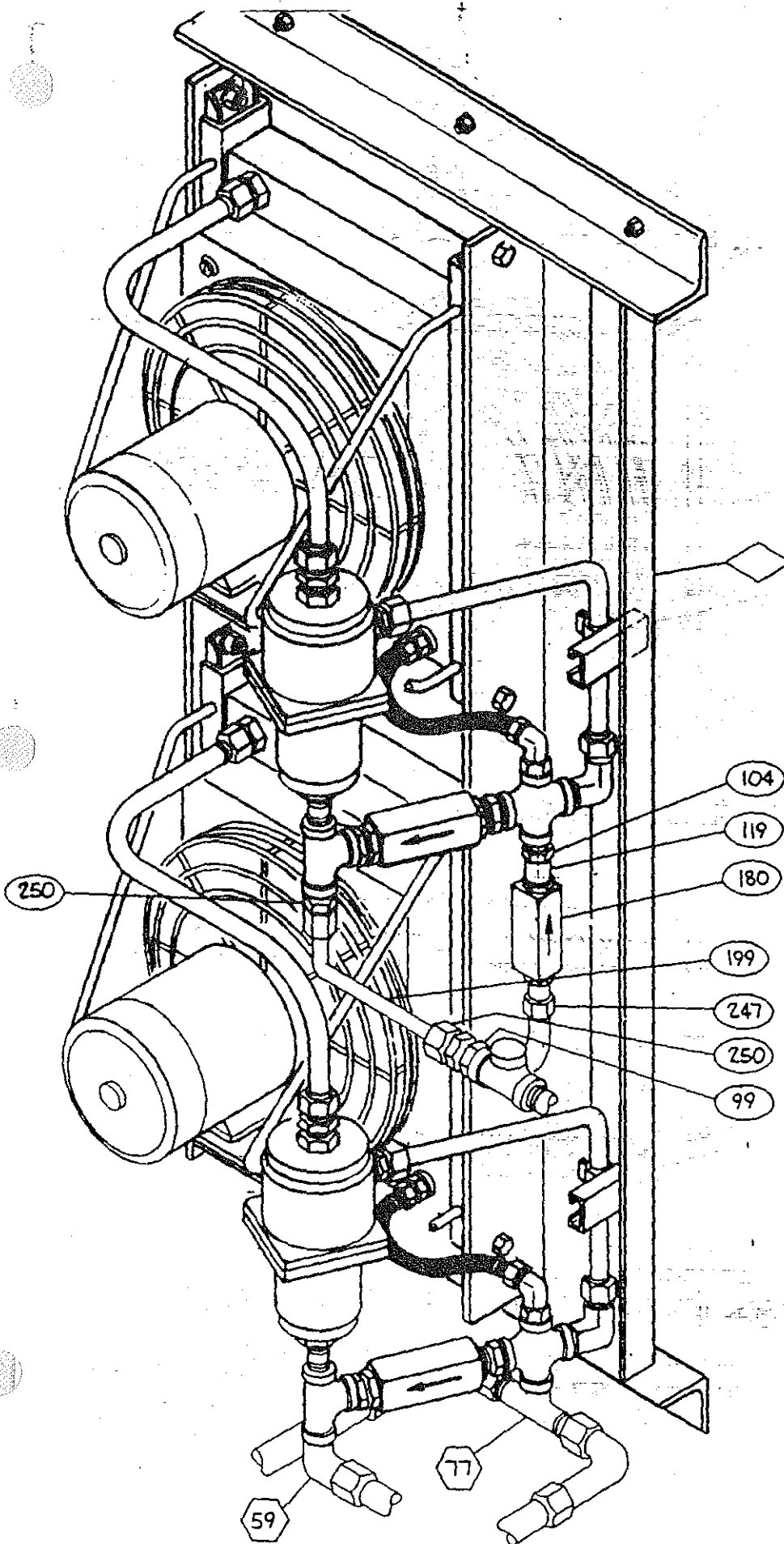
LARRY WOOD  
FALKIRK MINING CO.  
FALKIRK MINE  
P.O. BOX 1087  
UNDERWOOD, ND 58576

DRESSER INDUSTRIES, INC. • MARION DIVISION  
PRODUCT IMPROVEMENT LETTER



HOIST PULLDOWN SHAFT ASSEMBLY  
PARTS KIT FOR BLAST HOLE DRILLS

OLD  
DESIGN



REMOVE ITEMS INDICATED FROM

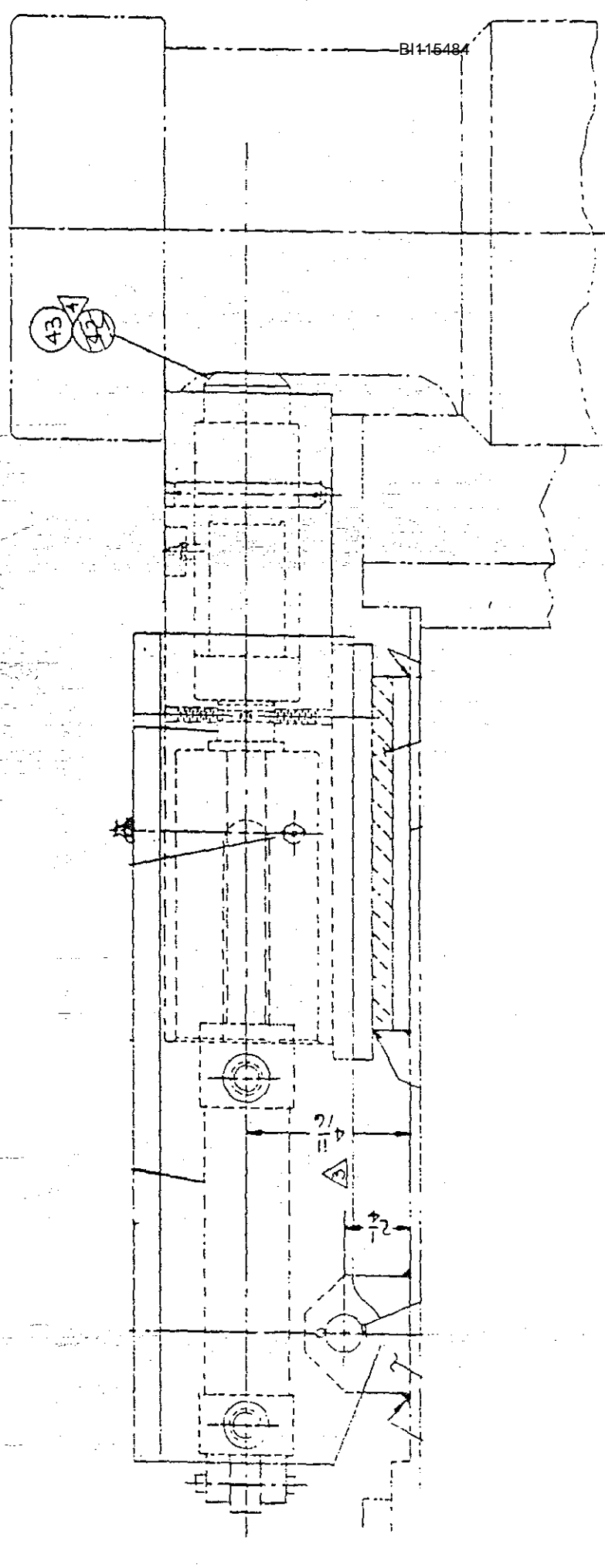
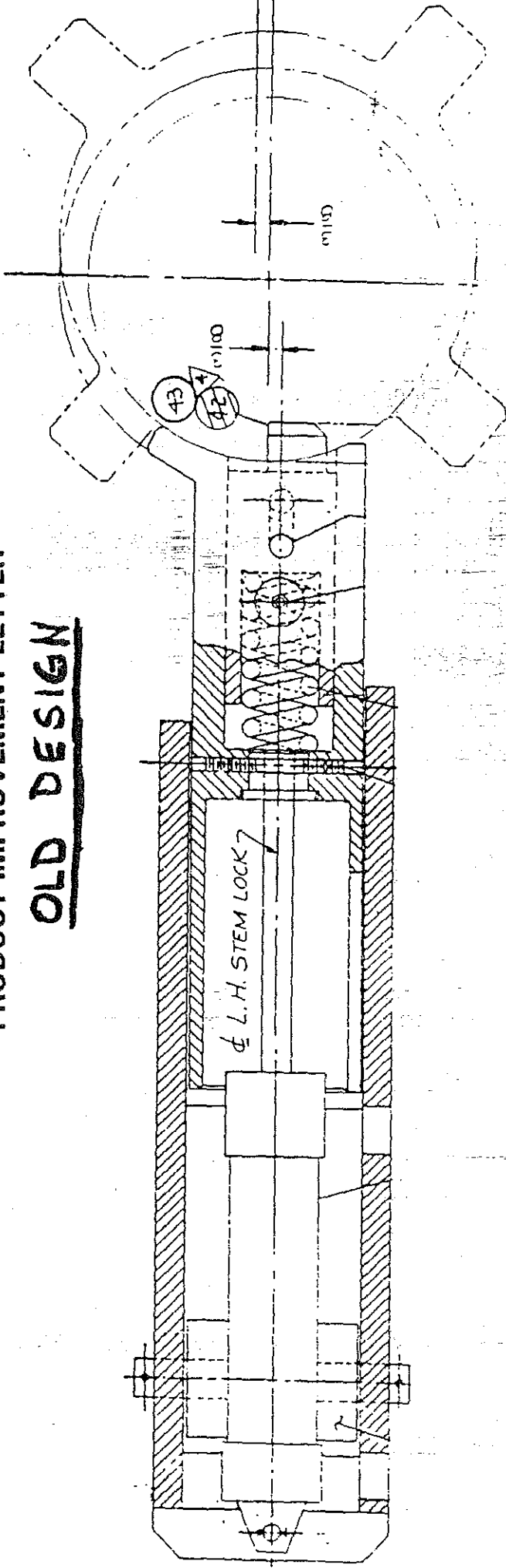
○ 113G153

⬡ 113G129

◇ 429954-0 (COMPLETE ASS'Y.)

DRESSER INDUSTRIAL • MARION DIVISION  
PRODUCT IMPROVEMENT LETTER

OLD DESIGN



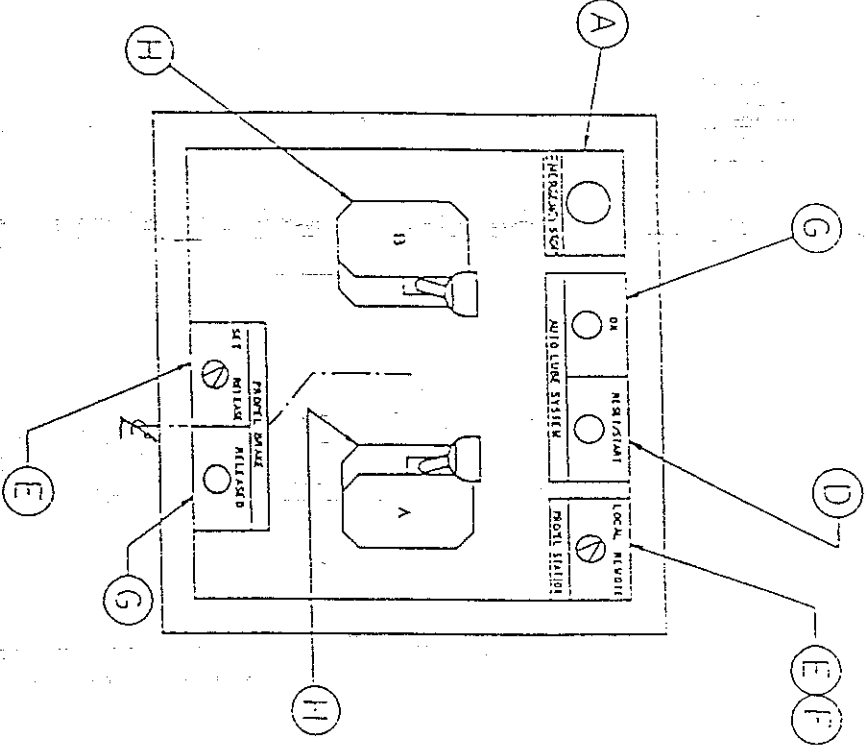
BI115484

NAME: STAND, PROPEL CONTROL

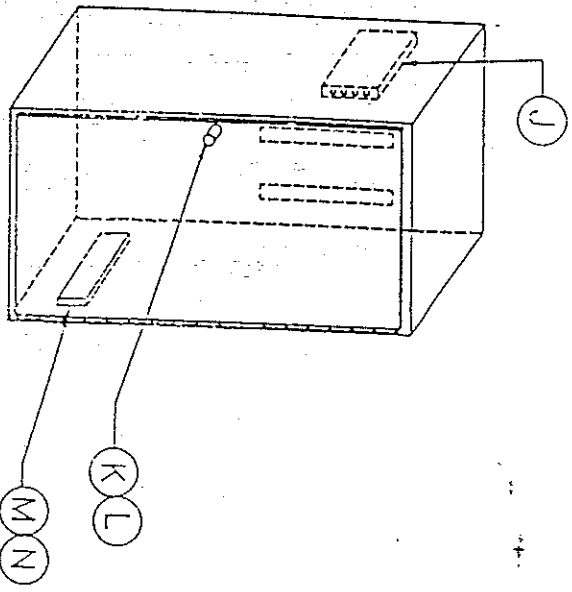
PART NO:  
 DAC. NO:



REV:  
 A



FRONT OF PANEL



DRESSER INDUSTRIES, INC. • MARION DIVISION

December 21, 1990

PRODUCT IMPROVEMENT LETTER  
LETTER NO. 63

DRESSER MARION STABILIZER ARMS  
FOR MODEL 8200 DRAGLINES

Dresser Marion has recently engineered new design stabilizer arms for the Model 8200 Draglines.

This new single plate stabilizer arm directly replaces the cast eye and box section weldment configuration which was originally supplied with your machine.

You will notice in the attached sketch, Dresser engineers have put special emphasis into improving the fatigue life and strength of this new design.

This has been achieved by eliminating the critical weld joints in the area between the casting and the box plate section. This critical area has been replaced with parent metal in the new design stabilizer arms.

Also, castings have been eliminated in the new design stabilizer arms; therefore improving the overall quality/integrity of the part.

The particulars of this product improvement are as follow:

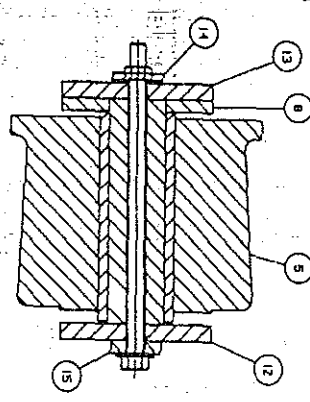
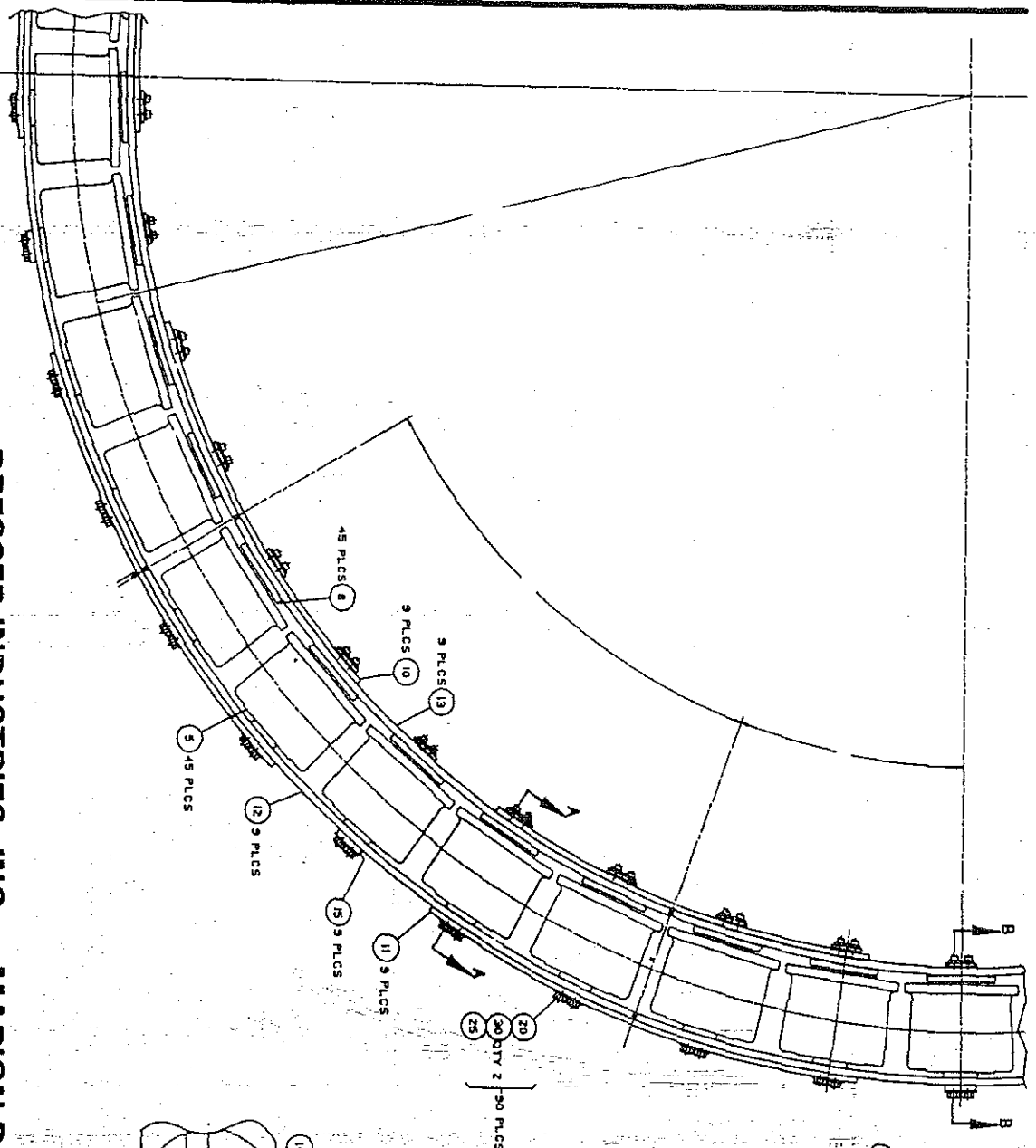
PART NO.	DESCRIPTION	PRICE
282492-2 replaces Part No. 24CF35 & 24CF48	New Design Stabilizer Arm	US\$ 49,417.00

Additional information is available by contacting the service products department in Marion, Ohio, or your area parts and service representative.

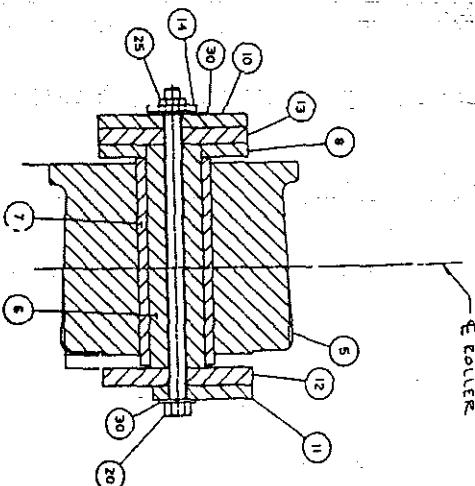
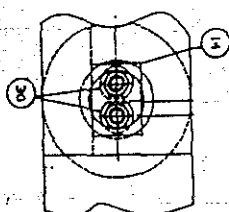
A: PILTR 63

**DRESSER INDUSTRIES, INC. • MARION DIVISION**

**PAGE 1 OF 2 PAGES**



SECTION B-B



1000 710

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