

OPERATING AND MAINTENANCE MANUAL

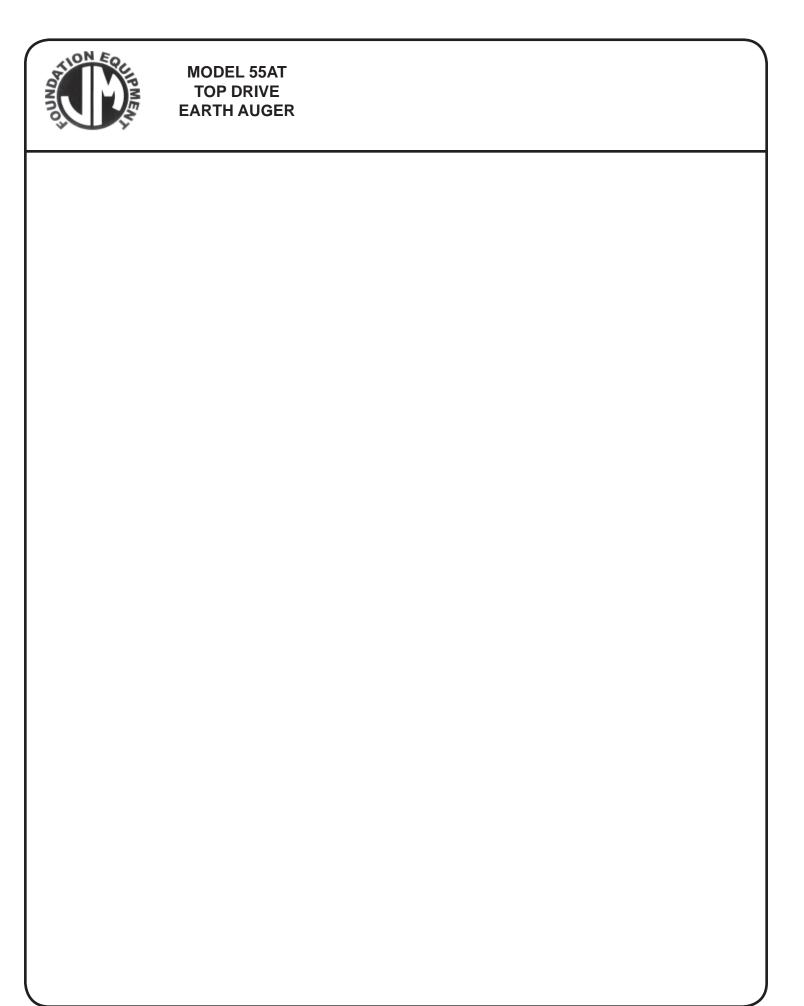
J&M MODEL 55AT

TOP DRIVE EARTH AUGER

WITH MODEL 315 POWER PACK

OM-55AT-315-09-14







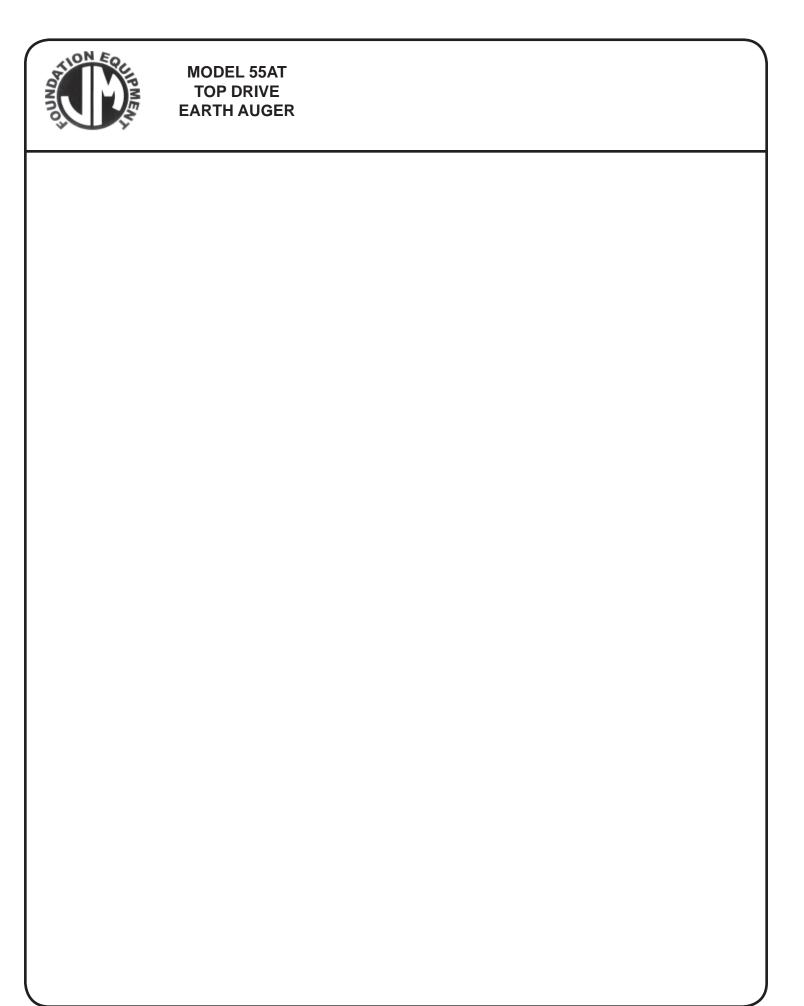
J&M MODEL 55AT TOP DRIVE EARTH AUGER WITH MODEL 315 POWER UNIT

PREFACE

This manual was prepared to acquaint the owner, operator and serviceman with the operation and maintenance of the top drive earth auger. We strongly suggest that this manual be carefully studied before operating or undertaking any maintenance work on the unit. It is not meant to be all inclusive as to content, and any questions and/or doubt should be directed to J&M before proceeding with any operation or maintenance.

Manual release date: 02-28-08

J&M reserves the right to update or revise this manual as required, check with J&M for current release date.





Warranty

American Piledriving Equipment, Inc. STANDARD WARRANTY

American Piledriving Equipment, Inc. (APE/J&M) warrants new products sold by it to be free from defects in material or workmanship for a period of one year after the date of delivery to the first user and subject to the following conditions:

APE/J&M's obligation and liability under this WARRANTY is expressly limited to repairing or replacing at APE/J&M's option, any parts which appear to APE/J&M upon inspection to have been defective in material or workmanship. Such parts shall be provided at no cost to the user, at the business establishment of APE/J&M or the authorized APE/J&M distributor of the product during regular working hours. This WARRANTY, shall not apply to component

distributor of the product during regular working hours. This WARRANTY, shall not apply to component parts or accessories of products not manufactured by APE/J&M and which carry the warranty of the manufacturer thereof, or to normal maintenance (scraped and skived lube and fuel lines, worn cushion material in the drive base) or normal maintenance parts (such as fouled injectors, weakened check valve springs, damaged grease fittings caused by use over time).

Replacement or repair parts installed in the product covered by this WARRANTY are warranted only for the remainder of the warranty as if such parts were original

components of said product. APE/J&M makes no other warranty, expressed or implied and makes no warranty of merchantability of fitness for any particular purpose.

APE's obligation under this WARRANTY shall not include any transportation charges, costs of installation, duty, taxes or any other charges whatsoever, or any liability for direct, indirect, incidental or consequential damage or delay. If requested by APE/J&M, products or parts for which a warranty claim is made are to be returned transportation prepaid to APE/J&M. Any improper use, including operation after discovery of defective or worn parts, operation beyond rated capacity, substitution of any parts whatsoever, or parts not approved by APE/J&M or any alteration or repair by others in such manner as in APE/J&M's judgment affects the product materially and adversely, shall void this warranty.

ANY TYPE OF WELDING ON EQUIPMENT WILL VOID THE WARRANTY

Refusal: Vibros: If the pile does not move one foot in 30 seconds of vibro operation (driving or pulling) at full speed. Resort to a larger vibro. APE/J&M equipment may exceed the refusal driving criteria for short periods of time as may be needed to penetrate hard soil layers or obstacles. In such cases, a heat gun is used to monitor the temperature of the bearings and related components to prevent use of the machine beyond 210 degrees F. Contact APE/J&M or your local

APE/J&M distributor for special instructions when faced with refusal conditions.

Refusal: Diesels: Do not exceed 10 blows per inch or 120 blows per foot. In cases of setting of the pile it is permitted to increase the blow count to 250 blows per foot, but only for one foot of driving penetration. Pile inspectors should consult the APE factory for permission to exceed these limits. Failure to do so will void the warranty. This standard specification is accepted by the DFI (Deep Foundations Institute) and the PDCA (Pile Driving Contractors Association) and by all manufacturers of pile driving equipment.

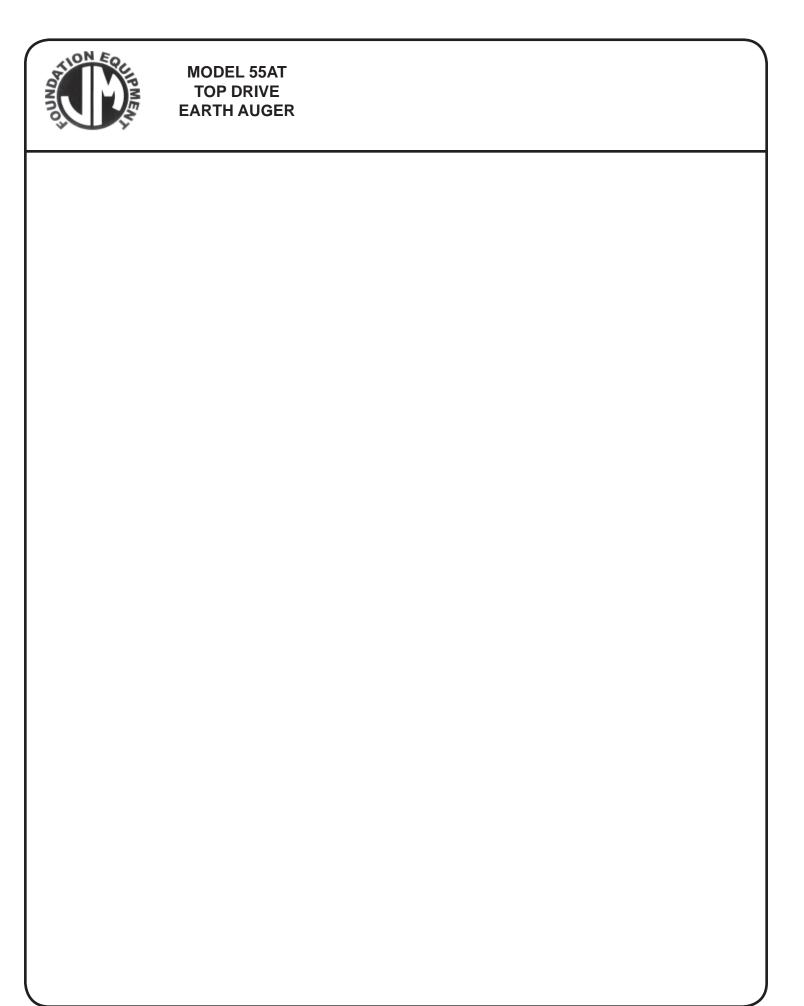
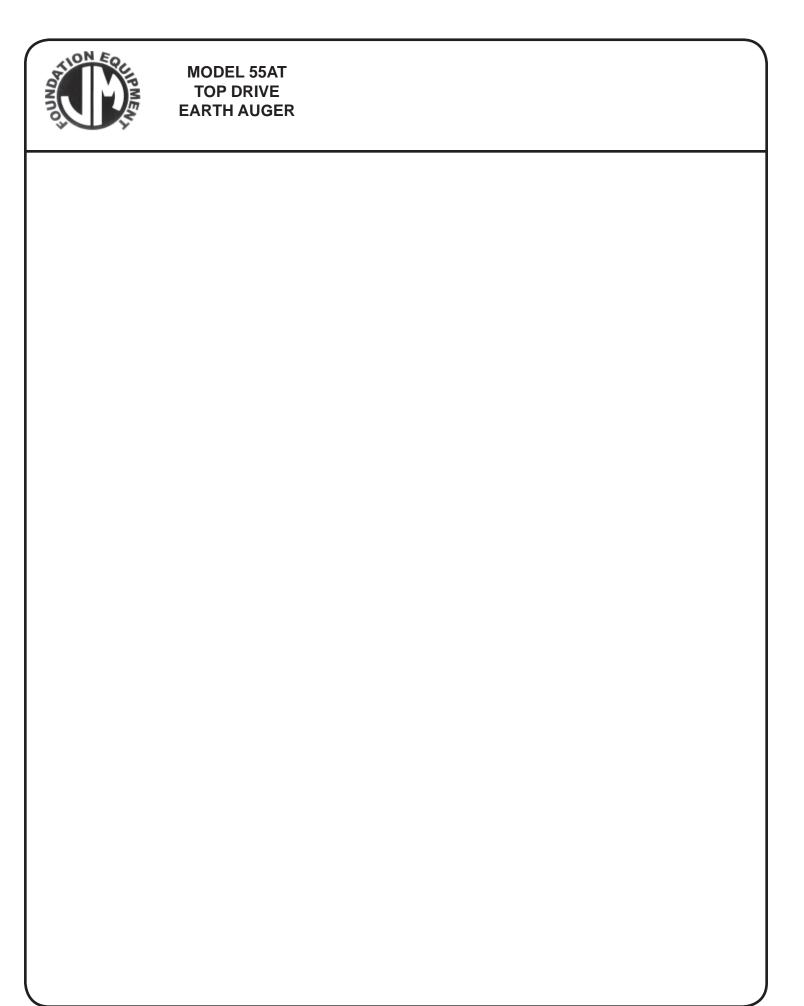




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OPERATING INSTRUCTIONS

GENERAL DESCRIPTION Ι.

A. GENERAL



When unloading and unpacking the auger, use extreme care. For your protection, make a thorough inspection of the unit immediately on delivery. In case of any damage or shortage, notify the transit agent at once and have the delivering carrier

make a notation on the freight bill.

B. SAFETY PRECAUTIONS

Safety is very important and is everyone's responsibility that operates this equipment or services this equipment.

WARNING Use the following safety precautions as a general quide to safe operations, when in doubt consult J&M

before proceeding with any operation that may produce an unsafe result. These safety guidelines do not constitute all possible safety issues that may occur during operation or maintenance.

- 1. Read this manual thoroughly before operating or working on the equipment.
- 2. Read and follow any safety instructions in the CATERPILLAR engine operators manual.
- 3. Only well trained and experienced personnel should attempt to operate or maintain this equipment.
- 4. Never adjust, lubricate or repair the unit when it is in operation, or lifted above ground
- 5. Never remove, paint over or cover warning or safety labels. If labels become damaged or unreadable, replace immediately.
- 6. All personnel should wear approved safety clothing, including HARD HATS, SAFETY SHOES, SAFETY GLASSES and HEARING PROTECTION when in the vicinity of this machinery.
- 7. Do not stand any closer to this equipment than necessary when it is in operation. Parts may loosen and fall. Never stand under operating, or elevated, equipment.
- 8. When maintaining or repairing the equipment, never substitute parts not supplied, or approved in writing, by J&M.
- 9. Do not weld, or flame cut, on this equipment.
- 10. Never use or store flammable liquids on or near the engine.
- 11. Insure that all lifting equipment, including cranes, wire rope, slings, hooks, shackles, etc., are properly sized for the worst case loads anticipated during operations.
- 12. If there are any questions about the weights, specifications, or performance of the unit, contact J&M before handling or operating the equipment.
- 13. If the equipment is to be used for anything other than drilling plumb holes, contact J&M before using the unit.
- 14. Check wire rope clips for tightness, and check wire ropes for wear, daily.



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

B. <u>SAFETY PRECAUTIONS (CONTINUED)</u>

- 15. Insure that ground vibrations will not damage or collapse adjacent structures or excavations.
- 16. Remove all tools, parts and electrical cords before starting the unit.
- 17. When operating in an enclosed area, pipe exhaust fumes outside. Continued breathing of exhaust fumes may be fatal.
- 18. When servicing batteries, do not smoke or use open flames in the vicinity. Batteries generate explosive gas during charging. There must be proper ventilation when charging batteries.
- 19. When filling fuel tank, do not smoke or use open flame in the vicinity.
- 20. If abnormal equipment operation is observed, discontinue use immediately and correct the problem. Do not leave the equipment control pendant (radio control) unattended.
- 21. Store oily rags in approved containers, and away from engine exhaust system.
- 22. Make sure that the vibrator is OFF before starting the power unit engine.
- 23. Do not adjust, or set, hydraulic pressures higher or lower than those specified in this manual.
- 24. Never operate this equipment with hydraulic hoses that are damaged or "kinked". Replace damaged hoses immediately.
- 25. Do not lift, or support, hydraulic hoses with wire rope slings.
- 26. Never attempt to connect quick disconnects when the power unit is running.
- 27. Do not pull on, or attempt to move equipment, with hydraulic hoses.
- 28. Do not attempt to locate hydraulic leaks with your hands. High pressure hydraulic leaks can penetrate the skin, causing severe damage, blood poisoning and infection. Do not attempt to repair leaks while the equipment is in operation.
- 29. Do not attempt to tighten, or loosen, fittings or hoses when the machine is in operation.
- 30. Power unit must always be placed on level, stable, ground.
- 31. Do not remove power unit heat shields, or operate power unit without heat shields. Severe fires may result.
- 32. A properly maintained fire extinguisher, suitable for oil fires, must be kept in the immediate vicinity of equipment operations.
- 33. When moving or transporting this equipment, insure that the vehicle or vessel is of sufficient capacity to handle the load, and that the equipment is properly tied down.
- 34. When moving or transporting this equipment, be sure that quick disconnect dust caps are tight, and that cap safety cables are in place. Be sure that all equipment parts are tight, or properly secured, before shipment. Unsecured parts may vibrate loose and fall, during transport, causing injury or property damage.
- 35. Keep crane boom, piles, leads, wire rope and other equipment at least 15' (5M) from electrical power lines, transformers and other electrical equipment, or at such distance as required by applicable safety codes.



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

B. <u>SAFETY PRECAUTIONS (CONTINUED)</u>

- 36. Rounded or damaged bolt heads or nuts should be replaced so that proper torque values may be obtained. Proper torque values are necessary to prevent parts on this equipment, leads and crane boom from loosening and falling. Refer to Torque Chart, in this manual, for proper values.
- 37. When extracting piles, always attach a safety line between pile and crane hook.
- 38. Keep hands away from swivel joint, output shaft and flighting.
- 39. Keep hands away from auger during operation. Clearances may change causing pinch points.
- 40. When drilling "batter" piles, insure that the leads, and crane boom, have sufficient bending strength to handle the worst case load. Consult J&M.

REMEMBER, SAFETY IS EVERYONE'S BUSINESS.



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

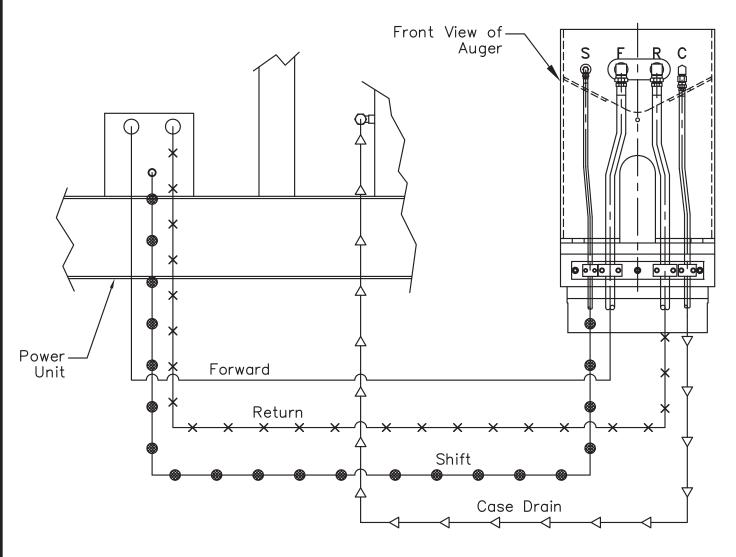


Fig 1



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

C. CONNECTION OF HYDRAULIC HOSES

- 1. Connection of hoses at power unit.
 - a. The auger is connected to the power unit by four hydraulic hoses (Fig. 1) on the previous page.



The power unit must be shut down during connection of the hydraulic hoses.

- b. The hoses connect to the power unit with quick-disconnect couplers. Hose couplers are arranged to insure correct connections at the power unit. See the diagram (Fig. 1) for correct hose connection.
- c. Clean couplers with a lint-free cloth before making connections.



Do not use engine starting fluid to clean quick disconnects, this will damage the seals and result in an oil leak.

- d. Make sure that the couplers are fully run up, and hand tightened only, do not use wrenches to over tighten.
- 2. Connection of hoses at auger.
- a. The auger is usually shipped with the hoses attached to the auger. If the hoses have been shipped separately, they must be connected in the field. Fig. 1 shows the correct arrangement of the four hoses connecting the power unit to the auger.

D. FILLING AUGER FORWARD AND REVERSE HOSES

- The auger is usually shipped with the hydraulic hoses full of fluid and the unit may be used immediately. However, if the pressure hoses have been removed from the auger, the hoses need to be filled with hydraulic fluid prior to full speed operation.
- 2. Start and warm up the diesel engine. Hold the auger in a vertical position.
- 3. With the engine warmed up and running at 1000 RPM, turn and hold the auger switch FORWARD. The hoses will fill in approximately 1 minute.
- 4. The output shaft will begin to rotate, this means the Forward pressure hose is full of hydraulic fluid. The Reverse pressure hose will fill directly as it is the hose that the hydrulic fluid is being returned to the power unit by.



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

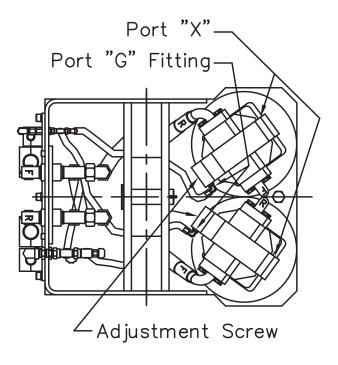


Fig 2

E. FILLING SHIFT HOSE

- 1. After the Forward and Reverse hose have been filled.
- 2. With the engine warmed-up and running at 1000 RPM, loosen the hose Port "G" Fittings on each motor. Turn the AUTO-MAX-HALF switch to MAX. Wait until oil flows from the connections. When oil flows without air, tighten Port "G" Fittings and turn switch to Auto. Turn switch to Max and back to Auto five times. Turn switch to Max and loosen the hose Port "G" Fittings on each motor again till you see oil flowing with out air to confirm the air has been removed from the hoses tighten Port "G" Fittings. Turn switch back to Auto. See (Fig 2) above for the Port "G" Fittings.

F. LUBRICATING THE ROTARY JOINT

Grease the rotary joint packing box (the upper fitting) with 3 to 5 shots at the beginning of the shift and then every 2-4 hours always while rotating under no pressure.

Grease the rotary joint bearing housing once daily (the lower fitting) after 1 hour of rotating until grease exits the bearing housing.



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

G. SETTING MOTOR SHIFT PRESSURE

- 1. Insert a flow meter and needle valve in the return drive line at the power unit. Make sure the needle valve is fully open.
- 2. Install a 3,000 psi gauge in the "X" port of each motor, this port is on the opposite of the end cap from the adjustment screw. As shown in Fig 2.
- 3. Remove the shift line QD and run hose into a bucket.
- 4. With the engine running at 1500 RPM start the drill in "FORWARD" with the control switch in the "AUTO" position.
- 5. Use the needle valve to increase drive pressure to 2800 PSI by slowly closing the needle valve.
- 6. With drill running, check to see if there is pressure on "X" port gauges. If so, turn the adjustment screw out until there is no pressure reading while the FORWARD drive pressure remains at 2800 PSI.
- 7. With drill running and drive pressure at 2800 PSI and 0 PSI on "X" port gauges, the drill will begin to slow down from High speed to High Torque.
- 8. Both motors are to be adjusted so the "X" port gauges respond at the same pressure.
- 9. Lock the adjustment screw down and double check.
- 10. Open the needle valve to lower the drive pressure and the drill will go back to (Minimum displacement) HIGH Speed. Close the needle valve and at 2800 psi the drill will begin to slow down as it goes into High Torque.



OPERATING INSTRUCTIONS

I. PREPARATION FOR OPERATION

H. CONTROL SWITCH NOTATION

- AUTO = Max drill speed up to 2800 psi drive pressure. Above 2800 psi the drill motors shift to low speed maximum torque. When drive pressure falls below 2800 psi max drill speed will continue.
- MAX = Maximum torque with full pump flow and full relief valve setting.
- HALF = This setting provides only one half of the pump flow to the drill. It also shifts the drill to full torque. This is all done electronically through valves on the power unit control manifold. This setting will run the drill at much less than half the max speed.

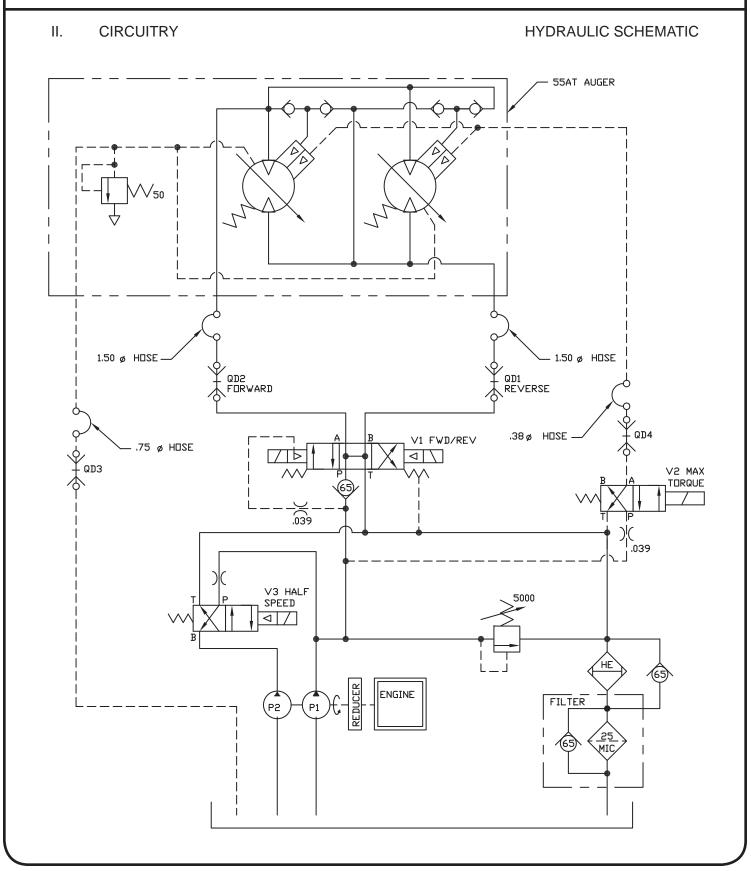
Using 55AT from Vibro Power unit

The clamp open circuit is used to control the 55AT speed / torque

- It is best to rewire the clamp solenoids so that the "CLOSE" switch activates the "OPEN" solenoids. This allows the switch to maintain it's position and not use the pressure switch or check valve in the "CLOSE" circuit. The clamp pressure should be turned down to 1500 psi.
- Having the CLAMP switch in the "OFF" position allows the 55AT to run in AUTO. The drill will run in full speed until drive pressure reaches 2800 psi and the motors will shift to low speed maximum torque. When drive pressure falls below 2800 psi max drill speed will continue.
- Turning the CLAMP switch to "CLOSE" will shift the drill into maximum torque with full pump flow and full relief valve setting.



OPERATING INSTRUCTIONS

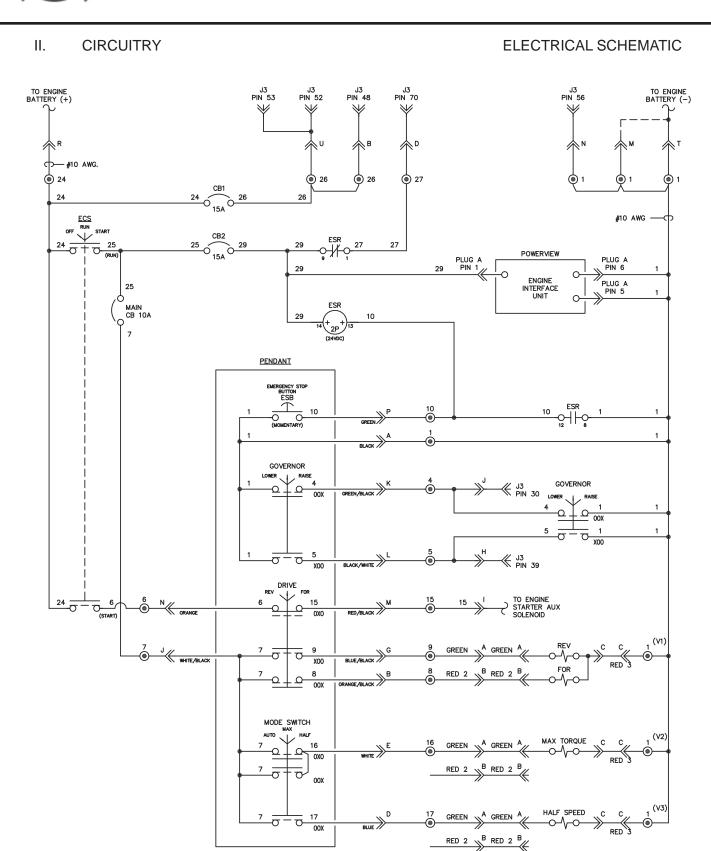




OPERATING INSTRUCTIONS



OPERATING INSTRUCTIONS





OPERATING INSTRUCTIONS



PARTS LIST

III. GENERAL DATA

A. ABBREVIATIONS

The abbreviations shown below are used throughout the parts lists and various other parts of the manual.

ASM. Assembly

BHCS Button Head Cap Screw

Cyl. Cylinder DC Direct Current

FHCS Flat Head Cap Screw
FLCS Flanged Head Cap Screw

Gr Grade HC High Collar

HHCS Hex Head Cap Screw
HHPP Hex Head Pipe Plug
HSSS Hex Socket Set Screw

Hyd. Hydraulic ID Inside Diameter

Lg. Long mm Millimeter Mtg. Mounting

NPT. National Pipe Thread OD Outside Diameter

PHMS Phillips Head Machine Screw

P/N Part Number Qty. Quantity

RHMS Round Head Machine Screw

Sch. Schedule

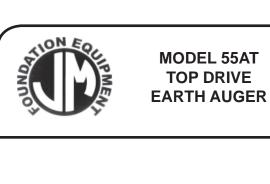
SHCS Socket Head (Allen) Cap Screw

SHPP Socket Head Pipe Plug
SHSS Socket Head Shoulder Screw

S/N Serial Number

Sol. Solenoid

UNF Unified National Fine thread UNC Unified National Course thread



PARTS LIST



PARTS LIST

III. GENERAL DATA

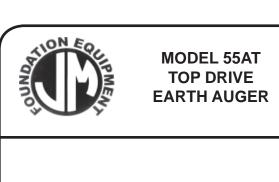
B. SCREWS AND BOLTS

- 1. Practically all connections on the unit are made with socket head (Allen) cap screws. These high-strength screws are available at most industrial supply houses.
- Screws and bolts are designated in the PARTS LIST in abbreviated form. (Refer to the previous page, for specific abbreviations). Listed below is a typical screw description: .50 13 UNC x 1.50 Lg SHCS .50 = Diameter
 13 UNC = Threads Per Inch

13 UNC = Threads Per Inch 1.50 Lg = Length SHCS = Screw Type Abbreviation

C. SERIAL NUMBER LOCATIONS

- 1. The following J&M units are serial numbered separately:
- a. Earth Auger
- b. Power Unit
- 2. In addition to the serial number plate itself, the serial number is stamped into each unit in one or more places as follows:
 - a. Earth Auger stamped twice once on the gear case cover between the planetary gear reducers, once on the gear case near the hose clamp plate.
 - b. Power unit stamped twice once on the hydraulic oil reservoir, once on sub-base near the heat exchanger.



PARTS LIST



PARTS LIST

IV. ORDERING PARTS

A. PROCEDURE

- 1. When ordering parts, **be sure to include the model and serial number** of the unit or component. Confirm all telephone orders immediately to avoid duplicating shipment.
- ORIGINAL EQUIPMENT; Where component serial numbers are given, these
 apply only to equipment and components originally furnished with the unit. Where
 equipment has been changed or upgraded these numbers may not be an adequate
 description.
- 3. SHIPMENT; Specify shipping address, phone number, billing address and method of shipment. UPS and air express shipments must have street address for delivery. All shipments will be made freight collect unless instructed otherwise.
- 4. SHORTAGES; Claims for shortages, damage or errors should be made immediately upon receipt of parts. No responsibility will be assumed for delay, damage or loss of material while in transit. Broken, damaged or lost material should be refused or a full description made of damage or loss to the carrier agent on the freight or express bill.
- 5. RETURN OF PARTS; If for any reason you desire to return parts to the factory or to any distributor from whom these parts were obtained, you must first secure permission to return the parts. Shipping instructions will be given along with this permission. A fifteen percent handling charge must be assessed against the returned shipment unless an error is made by the factory or by the distributor when filling your order.



PARTS LIST

IV. ORDERING PARTS

B. FITTING DESCRIPTION KEY

<u>FITT 2 L - 16 M 12 J 00 0 - 00L 0 0 0 1</u> SELECTOR INDEX 2 - INCH FITTING 9 - METRIC FITTING CONFIGURATION OR SHAPE OF FITTING S - STRAIGHT FITTING L - 90 Deg. ELBOW V - 45 Deg. ELBOW T - TEE C - CAP P - PLUG U - UNION X - CROSS (FOURTH END FITT'G REQ'D.) FIRST END SIZE * IN 1/16THS OF AN INCH (INDEX 2) IN MILLIMETERS (INDEX 9) SEE GENERAL SPECIFICATION SHEET FOR SEQUENCE OF ORDER FIRST END FITTING STYLE SEE FITTING STYLE SELECTOR CHART SC-1 SECOND END SIZE IF APPLICIABLE - SEE FIRST END SIZE SECOND END FITTING STYLE IF APPLICABLE - SEE FIRST END FITTING STYLE THIRD END SIZE IF APPLICABLE - SEE FIRST END SIZE THIRD END FITTING STYLE IF APPLICABLE - SEE FIRST END SIZE

* EXCEPTIONS

90 = 10" 96 = 6"92 = 12" 98 = 8"

94 = 14" 99 = NON CODE SIZE

MATERIAL

1 - CARBON STEEL

2 - BRASS

4 - STAINLESS STL

5 - AAR MAL IRON

6 - MALEABLE IRON

8 - FORGED STEEL

SPECIAL NOTATIONS

PRESSURE RATING

0 - NONE

1 - 125 LB.

3 - SCH 40

4 - SCH 80

INSTALLATION AID OR STYLE OF HEAD

0 - NOT APPLICABLE

H - REGULAR HEX

Q - SQUARE HEAD (EXT.)

R - SQUARE HEAD (INT.)

S - HEX HEAD (INT SOCKET)

T - HEX HEAD (EXT.)

LENGTH CODE

(ELBOWS & NIPPLES)

__L - LONG (ELBOW)

__X - EXTRA LONG (ELBOW)

__C - CLOSE (NIPPLE)

PIPE NIPPLES (LONG) ONLY IN DEC. INCHES FOR INDEX 2

050 = 5.0 INCHES

105 = 10.5 INCHES

IN MILLIMETERS FOR INDEX 9

120 = 12.0 MILLIMETERS

084 = 8.4 MILLIMETERS

FOURTH END SIZE & FITTING STYLE

(CROSSES ONLY)

SEE FIRST END FITTING SIZE OR

END STYLE



PARTS LIST

IV. ORDERING PARTS

C. FITTING STYLE SELECTOR CHART

FOR END FITTING STYLE SELECTION

M	JIC MALE 37 Deg. FLARE
P	MALE PIPE NPT
R	S.A.E. MALE O-RING (& ADJUSTABLE)
B	JIC MALE 37 Deg. FLARE BULKHEAD
	MALE PIPE NPT SWIVEL
S	B.S.P. MALE PIPE
T	HOSE BARB

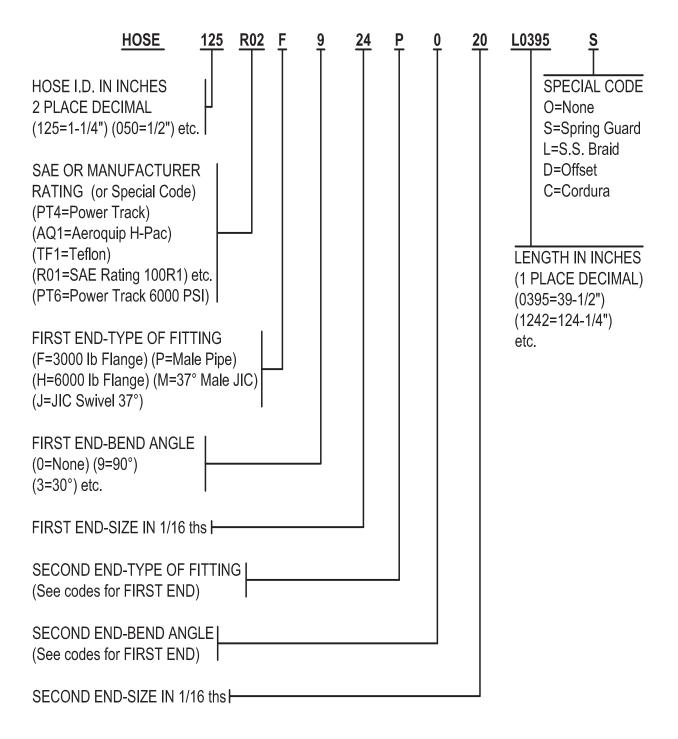
		JIC FEMALE 37 Deg. FLARE (& SWIVEL)		
\bigcirc		FEMALE PIPE NPTF		
\times		S.A.E. FEMALE O-RING		
		FEMALE PIPE NPSM-SWIVEL		
F		SPLIT FLANGE 3000 PSI. CODE 61		
		SPLIT FLANGE 6000 PSI. CODE 62		
1 — 2				



PARTS LIST

IV. ORDERING PARTS

D. HOSE DESCRIPTION CODE





PARTS LIST

IV. ORDERING PARTS

E. PARTS IDENTIFICATION

1. Parts lists and drawings are included on the following pages for the equipment components shown below:

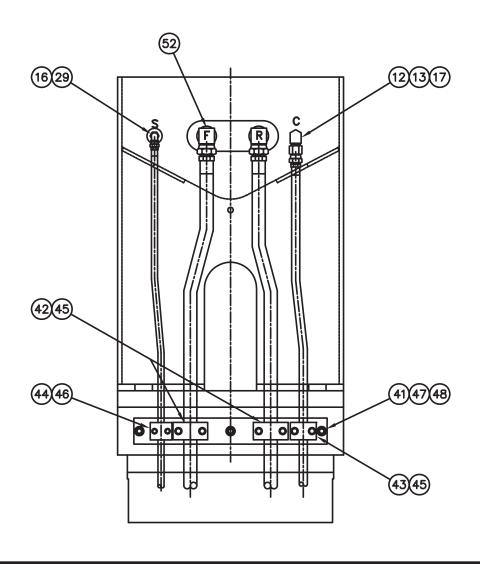
a.	AUGER ASSEMBLY	800481	
b.	GEAR BOX ASSEMBLY	810421	
C.	HOSE ASSEMBLIES - INTERCONNECTING	800531	
d.	PENDANT ASSEMBLY	810933	
e.	POWER UNIT ASSEMBLY	800437	
f.	CONTROL MANIFOLD ASSEMBLY	810737	
g.	CONTROL BOX ASSEMBLY	810935	
h.	3" ROTARY JOINT ASSEMBLY	800275	older option
i.	3" ROTARY JOINT ASSEMBLY	800611	current option
j.	ROLLER GUIDE ASSEMBLY	800269	
k.	8 X 26 SLED LEAD GUIDE ASSEMBLY	800265	
l.	8 X 32 LEAD ADAPTER ASSEMBLY	800373	
m.	32" LEAD ADAPTER SLED ASSEMBLY	800469	



PARTS LIST

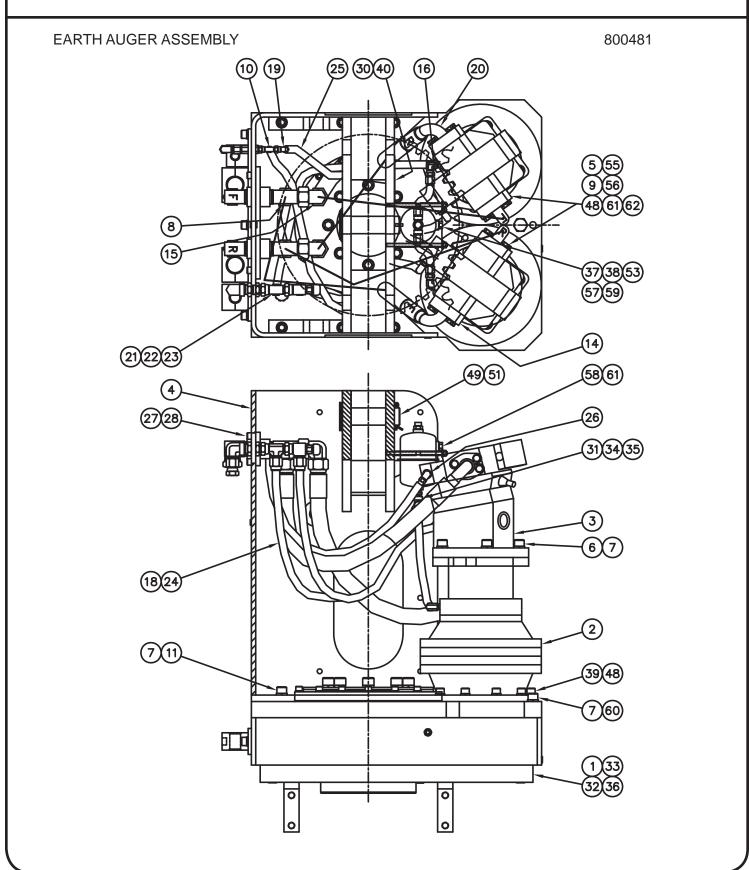
EARTH AUGER ASSEMBLY

800481





PARTS LIST





PARTS LIST

Item	Part Number	Qty.	Description	
		<u> </u>		
1	810421	1	5050 AUGER TRANSMISSION CASE	
2	400710	2	PLANTETARY GEAR REDUCER "D"	
3	400708	2	HYDRAULIC MOTOR AUTOTORQUE	
4	400541	1	LIFTING BALE	
5	100121	16	.50 LOCK WASHER MEDIUM	
6	100067	8	.75-10 X 2.5 LG SHCS LOC WEL	
7	100069	29	.75 LOCK WASHER MEDIUM	
8	100664	2	FITT2T-20P20M20M-0000001	
9	100037	4	2-222 O-RING 90 DURO	
10	400702	1	FITT2T-06J06M06M-000H001	
11	140111	16	.75-10 X 4.0 LG SHCS LW	
12	100489	1	FITT2L-12M12P000-0000001	
13	100243	1	FITT2S-12Q12N000-000H001	
14	400712	1	HOSE125PT4J020H920L05200	
15	130043	2	FITT2L-20M20J000-000H001	
16	120525	2	FITT2L-06P06N000-00L000L	
17	100387	1	FITT2S-12P12B000-000H001	
18	400704	2	HOSE050R01J012J012L03500	
19	400411	1	FITT2L-06M06J000-000H001	
20	400706	1	HOSE125PT4J020H920L04800	
21	100032	1	RELIEF VALVE	
22	400700	1	FITT2T-12J12M12M-000H001	
23	810759	1	#12JIC SWIVEL 90 W/ .50NPT TAP	
24	100609	2	FITT2S-12M12R000-000H001	
25	110633	2	HOSE038R02J006J006L0370S	
26	130057	2	FITT2L-06M06R000-000H001	
27	400722	1	COUPLER PLATE	
28	100119	4	.5-13 X 1.25 LG SHCS LOC WEL	
29	110199	1	FITT2S-06Q06B000-000H001	
30	130381	4	RIVET	
31	400917	2	HOSE050R01P006P006L02000	
32	100298	1	APE / J&M YELLOW PAINT/GAL	
33	100299	1	PRIMER/GAL	
34	110794	1	FITT2S-06P06P000-000H001	
35	400751	1	FITT2T-06Q06Q06Q-0000001	
36	110444	2	TRANSMISSION OIL / GAL.	
37	100535	2	.375 -16 HEX NUT	
38	400149	2	.375 LOCK WASHER	
39	140227	20	.625-11 x 2.0 LG SHCS	
40	400749	1	S/N PLATE	



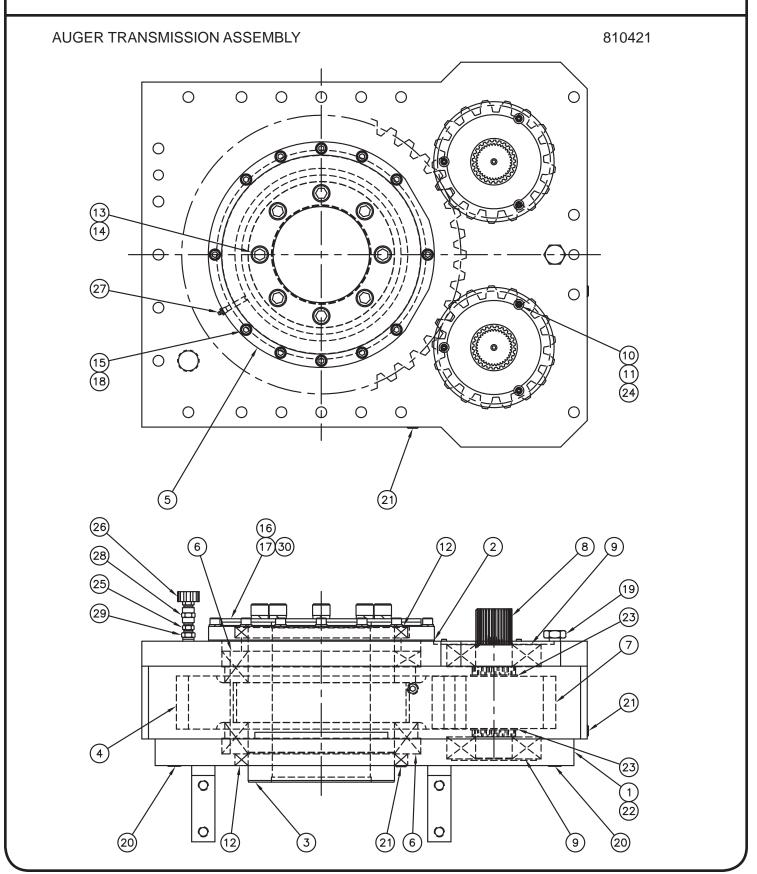
PARTS LIST

EARTH AUGER ASSEMBLY 800481

	Part		
l <u>tem</u>	Number	Qty.	Description
41	400557	1	HOSE CLAMP PLATE
42	100009	2	HOSE CLAMP
43	100013	1	HOSE CLAMP
44	100015	1	HOSE CLAMP
45	100011	14	.50-13 UNC X 2.00 LG SHCS
46	100017	2	.375-16 X 2.0 LG SHCS LOC WEL
47	100575	3	.625-11 x 1.25 LG SHCS
48	100007	20	.625 LOCK WASHER MEDIUM
49	400831	1	LIFTING PIN
50	400833	1	2in FLAT WASHER
51	300375	1	.312 x 5 LG COTTER PIN
52	400221	2	FITT2L-20M20P000-000H001
53	400151	2	.375 FLAT WASHER
54	150083	8	.437-14 X 2.5 SHCS W/LW
55	110986	8	#20 PH SPLIT FLANGE HALF
56	400739	16	.5-13 UNC X 2 LG HHCS
57	400923	2	.375-16 UNC X 7in LG ALLTHREAD
58	400915	1	EXPANSION TANK ASSEMBLY
59	400919	2	4in U-CLAMP
60	400045	5	.75-10 x 3.5 LG SHCS
61	140853	2	FITT2L-20H20M000-0000001
62	400656	2	HOSE125PT4J020J020L04900
63	400227	1	FITT2L-06M06P000-0000001
	400827		MINI SIGHT GLASS (BREVINI)
	400746		EXPANSION TANK BREATHER



PARTS LIST





PARTS LIST

AUGER TRANSMISSION ASSEMBLY

810421

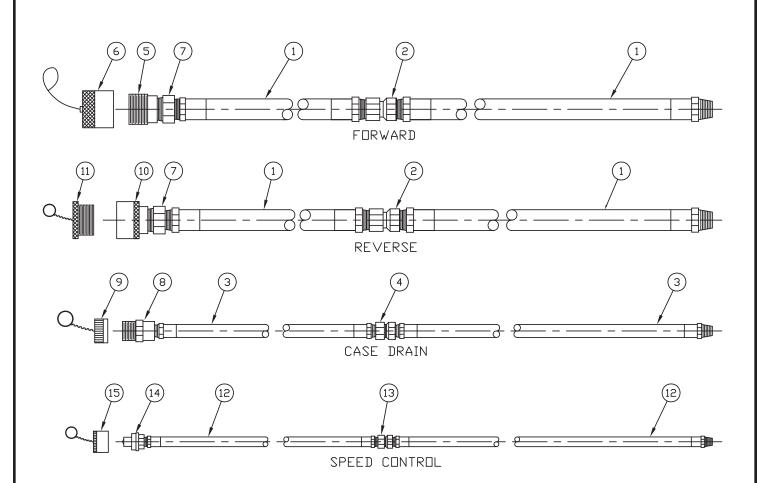
	Part		
l <u>tem</u>	Number	Qty.	<u>Description</u>
1	810419	1	GEAR BOX PIN ASSEMBLY
2	400529	1	SHIM PACK
3	400521	1	OUTPUT SHAFT
4	400519	1	GEAR
5	400525	1	RETAINER RING
6	400631	2	TAPERED BEARINGS
7	400527	2	PINION GEAR
8	400523	2	PINION SHAFT
9	150017	4	ROLLER BEARING
10	100576	6	.25-20 x .625 LG SHCS
11	100597	6	.25 FLAT WASHER
12	400635	2	SEAL
13	400913	8	.875-9 X 1.5 LG SHCS
14	400911	8	.875 HI COLLAR LOCK WASHER
15	400043	12	.5-13 x 2.25LG SHCS
16	400766	1	POLY-RING
17	400889	1	GROUT SHIELD
18	100121	12	.50 LOCK WASHER MEDIUM
19	400657	1	DIP STICK
20	100183	2	FITT2P-12P000000-000S007
21	100423	3	FITT2P-08P000000-000S007
22	110444	6	TRANSMISSION OIL / GAL.
23	400691	4	RETAINING RING
24	100559	6	.25 LOCK WASHER
25	130203	1	FITT2S-06P06P000-0300401
26	400845	1	BREATHER
27	100229	1	GREASE FITTING
28	110143	1	FITT2S-06Q06Q000-000H001
29	400357	1	FITT2S-08P06Q000-000H001
30	400965	1	SHIELD GASKET



PARTS LIST

INTERCONNECTING HOSE ASSEMBLY

800531



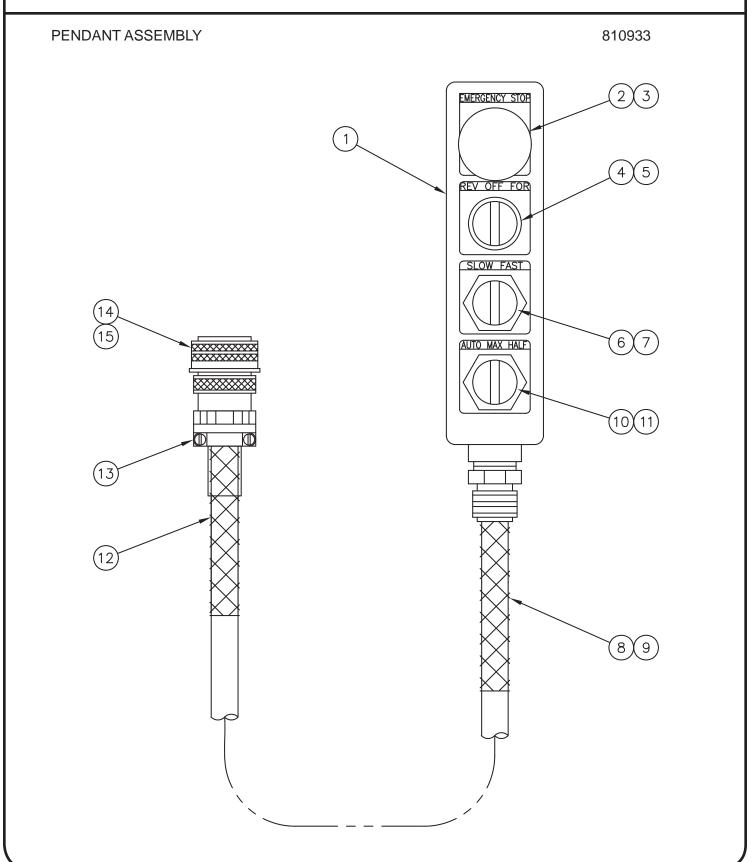


PARTS LIST

INTERCONNECTING HOSE ASSEMBLY

	Part		
l <u>tem</u>	Number	Qty.	<u>Description</u>
		-	
1	100233	4	HOSE125PT4P020P020L60000
2	100235	2	FITT2S-20Q20N000-000H001
3	100241	2	HOSE075R09P012P012L62000
4	100243	1	FITT2S-12Q12N000-000H001
5	110690	1	1.50 MALE DISCONNECT
6	110955	1	1.50 DUST CAP
7	400159	2	FITT2S-24P20Q000-000H001
8	400251	1	.75 MALE DISCONNECT
9	400253	1	.75 DUST CAP
10	110692	1	1.50 FEMALE DISCONNECT
11	110957	1	1.50 DUST PLUG
12	100247	2	HOSE038R02P006P006L62000
13	100249	1	FITT2S-06Q06N000-000H001
14	100245	1	.375 MALE DISCONNECT
15	100257	1	.375 DUST CAP
16	130243	10	RUBBER TIE DOWN







PARTS LIST

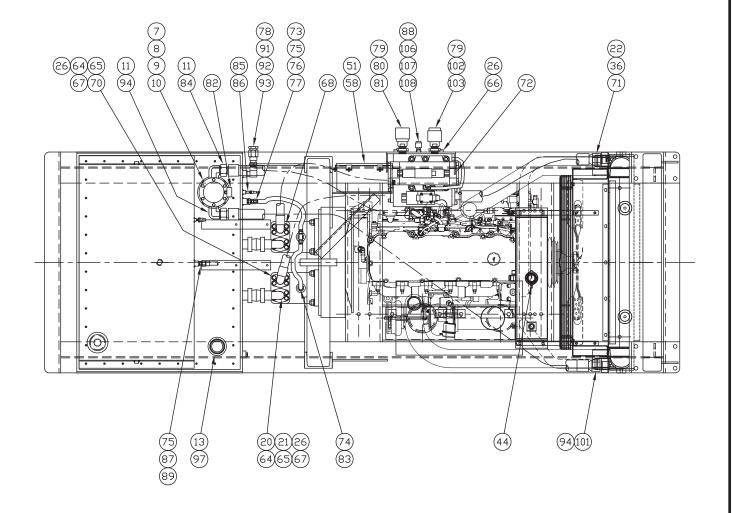
PENDANT ASSEMBLY 810933

	Part		
<u>Item</u>	Number	Qty.	Description
		•	•
1	130153	1	PENDANT ENCLOSURE
2	130509	1	EMERGENCY STOP LABEL
3	130507	1	EMERGENCY STOP BUTTON
4	100864	1	REV-OFF-FOR NAMEPLATE
5	130155	1	SWITCH
6	100562	1	SLOW-FAST NAMEPLATE
7	100566	1	SWITCH
8	110603	1	1.0 STRAIN RELIEF
9	100560	50	PENDANT CABLE/FT
10	400720	1	AUTO-MAX-HALF LABEL
11	400718	1	SWITCH 3 POSITION
12	170839	1	CORD GRIP PLUG END
13	170897	1	RECEPTACLE CLAMP
14	170895	1	PENDANT RECEPTACLE
15	170899	1	PENDANT RECEPTACLE COVER

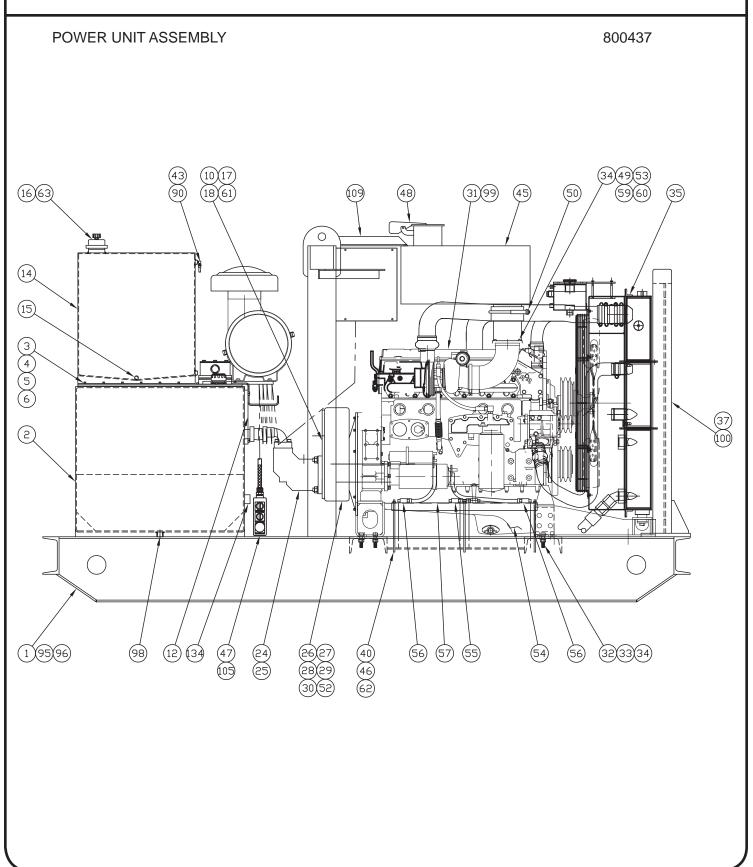


MODEL 55AT TOP DRIVE PARTS LIST

POWER UNIT ASSEMBLY 800437









POWER UNIT ASSEMBLY	800437
POWER UNIT ASSEMBLY	80043

	Part		
l <u>tem</u>	Number	Qty.	<u>Description</u>
1	400752	1	315 Skid Subbase
2	400754	1	315 Hyd Reservoir
3	400958	1	Reservior Cover
4	400956	1	Reservoir Cover Gasket
5	100595	39	.25-20 X 1.25 Lg SHCS
6	100559	38	.25 Lock Washer
7	400085	1	Return Filter Asm.
8	810119	2	K25 Element Assembly
9	100143	6	.375-16 X 1.25 Lg Shcs Loc Wel
10	400149	15	.375 Lock Washer
11	100588	2	FITT2L-24M24P000-0000001
12	400916	1	Sight Gage
13	300563	1	Breather/Filler
14	400914	1	Fuel Tank
15	100423	2	FITT2P-08P000000-000S007
16	100417	1	FITT2C-48Q000000-0000306
17	100700	2	.375-16 UNC X 1.25 HHCS
18	400724	1	Pump Pad Cover
19	100631	1	.25-20 X 2.00 Lg SHCS
20	100458	2	90 Deg. Flanged Adapter 20ph
21	100454	2	2"Tube Flex Master
22	170768	1	FITT2S-24M24R000-0000001
23	110244	1	Tube
24	100406	2	Main Pump(F12-110)
25	100782	8	.75-10 Flange Nut
26	100121	27	.5 Lock Washer Medium
27	100512	1	Multi-Pump Adapter
28	100462	12	.437-14 UNC X 1.25 Lg HHCS
29	100443	12	.437 Lock Washer
30	100445	8	.5-13 X 1.00 Lg Shcs Loc Wel
31	170907	1	C9 Diesel Engine
32	100085	6	.625-11 X 2.25 Lg SHCS
33	100086	6	.625-11 Esna Nut
34	100007	10	.625 Lock Washer-Medium
35	170925	1	Triple Core Cooler
36	170766	1	FITT2L-24J24M000-0000001
37	400755	1	Radiator Guard
38	400900	8	.312-18 UNC X 1.50 Lg HHCS
39	100289	22	.312-18 Hex Nut
40	100293	33	.312 Flat Washer



MODEL 55AT TOP DRIVE EARTH AUGER

PARTS LIST

POWE	ER UNIT ASSE	EMBLY		800437
	Part			
l <u>tem</u>	Number	Qty.	Description	
41	100287	22	.312 Lock Washer	
42	100051	6	.375-16 X 1.0 Lg SHCS Loc Wel	
43	100145	1	FITT2L-04M04P000-0000001	
44	100726	7	Antifreeze/Gal	
45	170762	1	Muffler	
46	100831	3	.312 Wing Nut	
47	810933	1	315 Pendant Asm w/ Plug	
48	140411	1	5.0 Rain Cap	
49	400892	1	Exhaust Adapter	
50	140369	3	5 In. U-Clamp	
51	810935	1	315 Engine Junction Box	
52	110444	2	Transmission Oil / Gal.	
53	110225	4	.625-11 X 1.50 Lg BHCS	
54	400890	2	Battery	
55	110653	1	Battery Cable-6	
56	100537	2	Battery Cable-24"	
57	400888	1	Battery Holddown	
58	110229	2	S/O Cord 6' Lg	
59	100273	4	.625-11 Hex Nut	
60	400886	1	Exhaust Adapter Gasket	
61	400151	8	.375 Flat Washer	
62	400231	3	Hold Down Stud	
63	400845	1	Breather	
64	110986	8	#20 Ph Split Flange Half	
65	100037	4	2-222 O-Ring 90 Duro	
66	100119	3	.5-13 X 1.25 Lg Shcs Loc Wel	
67	400739	16	.5-13 UNC X 2.00 Lg HHCS	

HOSE100PT4H920F020L03200

HOSE100PT4H920F020L03800

HOSE150R01J024F02406100

FITT2S-12P08Q000-000H001

FITT2S-08M08P000-000H001

FITT2T-08M08M08J-000H001

FITT2S-12P12P000-000H001

FITT2S-24P24P000-000H001

HOSE050R01J008J008L01450

HOSE050R01J008J008L02400

315 Control Manifold Asm

.312-18 X .75 HHCS

1.50 Male Disconnect

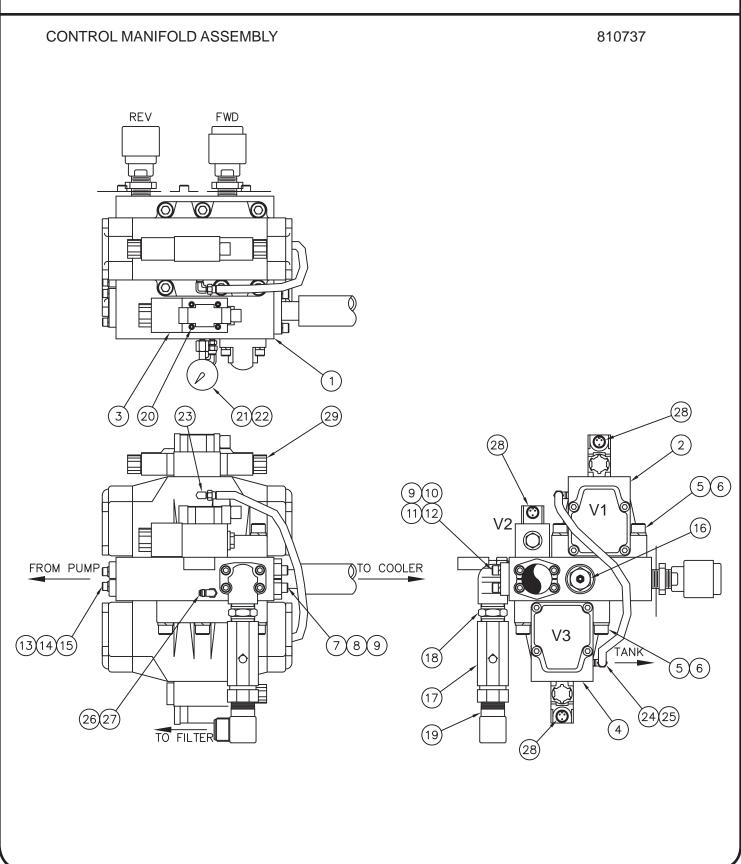




POWER UNIT ASSEMBLY	800437
POWER UNIT ASSEMBLY	00043

	Part		
l <u>tem</u>	Number	Qty.	<u>Description</u>
81	110955	1	1.50 Dust Cap
82	100436	1	Gage (0-60 Psi.)
83	110325	2	FITT2S-12R08M000-000H001
84	100482	1	HOSE150R02J024J024L07200
85	110203	1	FITT2S-04M04P000-000H001
86	110805	1	HOSE019R01J004J004L05500
87	100787	1	FITT2L-08M08R000-000H001
88	400728	1	HOSE038R01J006J006L01900
89	400854	1	HOSE050R01J008J008L12000
90	100319	1	HOSE025R02J004J004L16000
91	400773	1	FITT2L-12P12Q000-0000306
92	400095	1	.75 Female Disconnect
93	400121	1	.75 Dust Plug
94	100500	1	HOSE150R01J024J024L11800
95	100299	2	Primer/Gal
96	100298	2	APE / J&M Yellow Paint/Gal
97	140415	232	Hydraulic Fluid/Gal
98	100183	1	FITT2P-12P000000-000S007
99	400247	28	Engine Oil/Quart
100	400760	1	Radiator Grate
101	170764	1	FITT2V-24M24R000-000H001
102	110692	1	1.50 Female Disconnect
103	110957	1	1.50 Dust Plug
104	100422	2	.25-20 UNC Esna Nut
105	400732	1	Pendant Wire Hanger
106	100383	1	FITT2S-06P06B000-000H001
107	100777	1	.375 Female Disconnect
108	100737	1	.375 Dust Plug
109	400757	1	Muffler Bracket
110	400814	1	S/N Plate
111	600894	2	Radiator Support
112	120903	1	64 inch Split S/O Cord







PARTS LIST

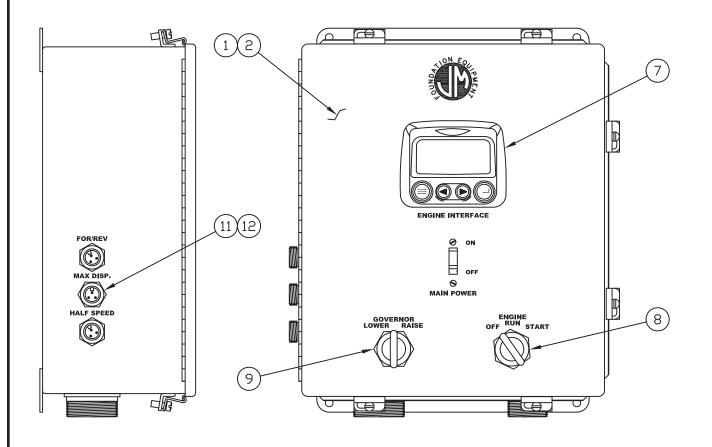
CONTROL MANIFOLD ASSEMBLY

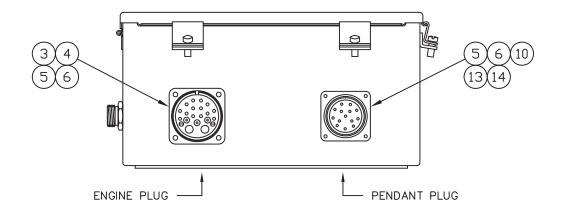
	Part		
l <u>tem</u>	Number	Qty.	<u>Description</u>
4	100750	4	DDIVE MANUFOLD
1	400756	1	DRIVE MANIFOLD
2	400786	1	4-WAY VALVE - 24V
3	400738	1	SOLENNOID VALVE
4	400740	1	SEQUENTIAL VALVE
5	110690	12	.75-10UNC X 2.75 LG SHCS
6	100069	12	.75 LOCK WASHER MEDIUM
7	100596	2	#24 SPLIT FLANGE HALF
8	100119	4	.5-13 X 1.25 LG SHCS LOC WEL
9	110119	2	2-225 O-RING
10	160461	1	#24-90 SOLID FLANGE
11	100163	4	.5-13 X 1.75 LG SHCS LOC WEL
12	100027	4	.5 HI-COLLAR LOCK WASHER
13	100045	4	#20 PA SPLIT FLANGE HALF
14	100037	2	2-222 O-RING 90 DURO
15	100851	8	.438-14 X 1.25 LG SHCS
16	400742	1	RELIEF VALVE
17	130339	1	1.5 CHECK VALVE
18	110037	1	FITT2S-24P24P000-000H001
19	100588	1	FITT2L-24M24P000-0000001
20	110260	4	.25-20 x 2.75 SHCS
21	100825	1	FITT2S-04Q02P000-000H001
22	400850	1	0-6000 PSI GAGE
23	100145	1	FITT2L-04M04P000-0000001
24	100719	1	HOSE025R02J004J004L03000
25	130229	1	FITT2T-04M04M04P-0000001
26	140385	1	FITT2S-06M02P000-000H001
27	400411	1	FITT2L-06M06J000-000H001
28	120897	3	LIGHTED DIN CONNECTOR
29	120905		SOLENOID DIN STYLE D03
30	120891		SOLENOID DIN STYLE D05
31		1	ORIFICE IN "P" PORT
32	130916	1	CHECK VALVE
33	110055	1	FITT2P-20P
		-	···



PARTS LIST

CONTROL PANEL ASSEMBLY





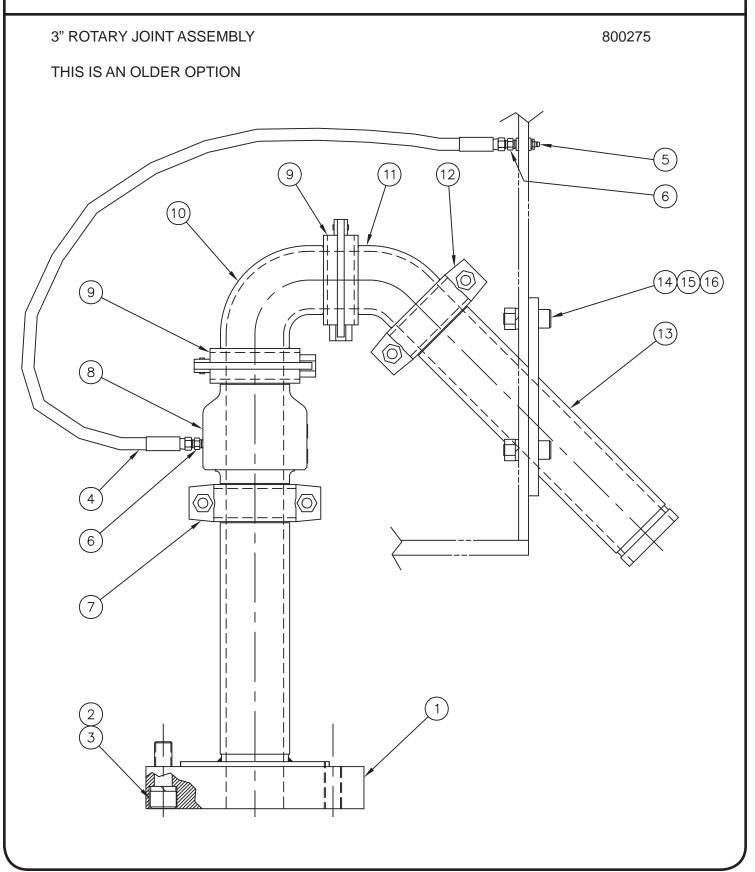


PARTS LIST

CONTROL PANEL ASSEMBLY

	Part		
l <u>tem</u>	Number	Qty.	Description
1	170900	1	ENCLOSURE
2	170898	1	FACEPLATE LABEL
3	170845	1	ENGINE RECEPTACLE
4	170847	1	ENGINE RECEPTACLE GASKET
5	110754	8	#6-32 X 0.375 LG RHMS
6	110696	8	#6 LOCK WASHER
7	170896	1	ENGINE INTERFACE PANEL
8	110615	1	ENGINE CONTROL SWITCH
9	100566	1	GOVERNOR RAISE / LOWER SWITCH
10	170861	1	PENDANT RECEPTACLE COVER
11	170849	3	S/O CORD RECEPTACLE
12	110843	3	0.50 LOCK NUT
13	170857	1	PENDANT RECEPTACLE
14	170859	1	PENDANT RECEPTACLE GASKET







PARTS LIST

3" ROTARY JOINT ASSEMBLY

800275

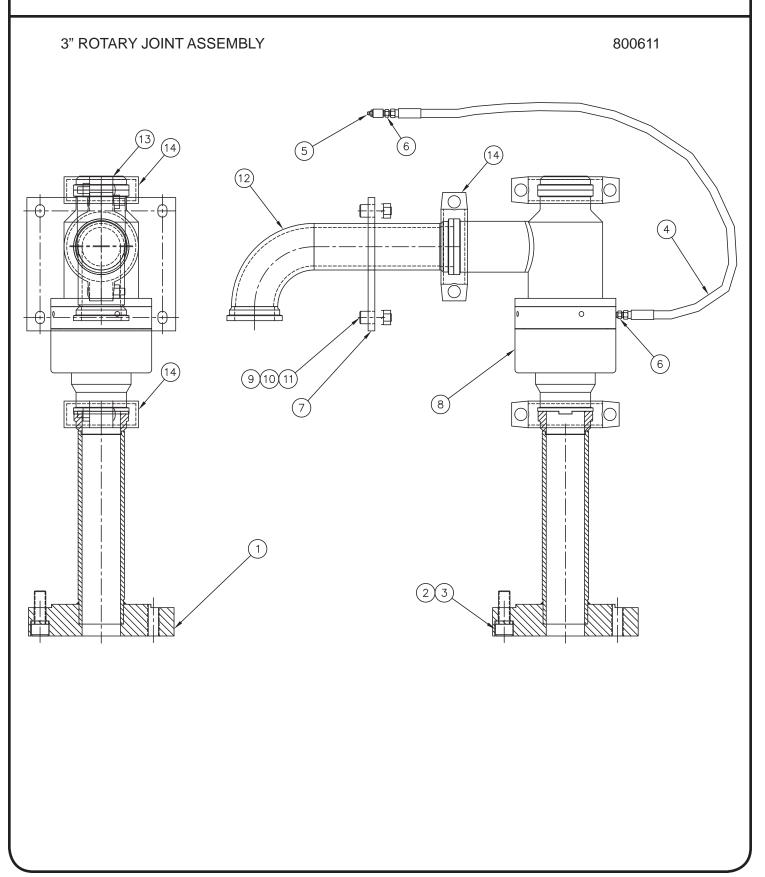
THIS IS AN OLDER OPTION

14.0.00	Part	Otr.	Description
l <u>tem</u>	Number	Qty.	Description
1	400871	1	3" ADAPTER
2	400909	8	.875-9 X 2.5 LG SHCS
3	400911	8	.875 HI COLLAR LOCK WASHER
4	100719	1	HOSE025R02J004J004L03000
5	100229	1	GREASE FITTING
6	140267	2	FITT2S-04M02P000-000H001
7	400477	1	3" VICTAULIC COUPLING
8	810551	1	3" SWIVEL JOINT ASM.(J&M)
9	400875	2	3" 78 COUPLING
10	400877	1	3-90 ELBOW
11	400879	1	3-45 ELBOW
12	400881	1	3" 75 COUPLING
13	400867	1	3" GROUT PIPE W/SUPPORT
14	100005	4	.625-11 X 1.75 LG SHCS LOC WELL
15	100273	4	.625-11 HEX NUT
16	100007	4	.625 LOCK WASHER MEDIUM
	800077		3.00 HEX ADAPTER
	800079		3" API ADAPTER

NOTE:

Thru bolts to shaft on a 9.250 Diameter Bolt Circle Threaded holes on a 7.875 Diameter Bolt Circle







PARTS LIST

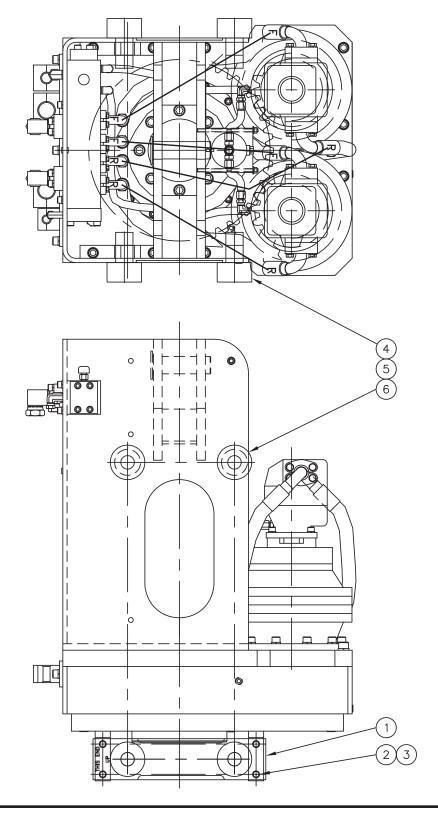
3" ROTARY JOINT ASSEMBLY

	Part	_	
l <u>tem</u>	Number	Qty.	Description
1	400600	1	3" ADAPTER
2	400909	8	.875-9 X 2.5 LG SHCS
3	400911	8	.875 HI COLLAR LOCK WASHER
4	100719	1	HOSE025R02J004J004L03000
5	100229	3	GREASE FITTING
6	140267	2	FITT2S-04M02P000-000H001
7	400602	1	BALE PLATE 3 INCH
8	400590	1	3 INCH KING OIL SWIVEL JOINT
9	100005	4	.625-11 X 1.75 LG SHCS LOC WELL
10	100273	4	.625-11 HEX NUT
11	100007	4	.625 LOCK WASHER MEDIUM
12	400596	1	INLET GROUTE TUBE
13	400594	1	PLUG
14	631057	3	3" COUPLING
	800077		3.00 HEX ADAPTER
	800079		3" API ADAPTER



PARTS LIST

ROLLER GUIDE ASSEMBLY





PARTS LIST

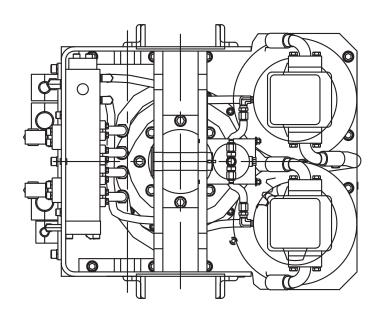
ROLLER GUIDE ASSEMBLY 800269

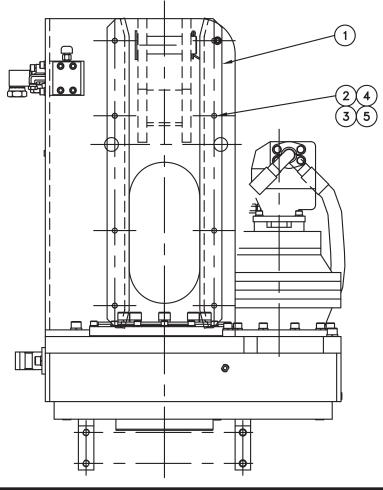
	Part		
l <u>tem</u>	Number	Qty.	<u>Description</u>
1	400549	2	ROLLER ADAPTER
2	100639	8	0.75-10UNC X 2.50 LG SHCS
3	100069	8	.75 LOCK WASHER
4	400597	8	4 INCH CAM FOLLOWER
5	400725	8	1.50-12UNF HEX NUT
6	100195	8	1.50 LOCK WASHER HEAVY



PARTS LIST

8 X 26 SLED LEAD GUIDE ASSEMBLY







PARTS LIST

8 X 26 SLED LEAD GUIDE ASSEMBLY

l <u>tem</u>	Part Number	Qty.	Description	
1	400551	2	8 IN. GUIDES	
2	100163	14	.5-13 X 1.75 LG SHCS LOC WEL	
3	100485	16	.5-13 HEX NUT	
4	100121	16	.50 LOCK WASHER MEDIUM	
5	400043	2	.5-13 X 2.25LG SHCS	





PARTS LIST

800469 32" LEAD ADAPTER SLED ASSEMBLY



PARTS LIST

F. RECOMMENDED TIGHTENING TORQUE

Nominal Screw Size	Nominal Socket Size	Tightening Torque Ft-Lbs. (Kg-M)	Nominal Screw Size	Nominal Socket Size	Tightening Torque Ft-Lbs. (Kg-M)
#10-24	5/32	6 Ft-Lbs. (.83 Kg-M)	#10-32	5/32	6 Ft-Lbs. (.83 Kg-M)
1/4-20	3/16	13 Ft-Lbs. (1.8 Kg-M)	1/4-28	3/16	15 Ft-Lbs. (2.1 Kg-M)
5/16-18	1/4	27 Ft-Lbs. (3.7 Kg-M)	5/16-24	1/4	30 Ft-Lbs. (4.2 Kg-M)
3/8-16	5/16	48 Ft-Lbs. (6.6 Kg-M)	3/8-24	5/16	55 Ft-Lbs. (7.6 Kg-M)
7/16-14	3/8	77 Ft-Lbs. (10.6 Kg-M)	7/16-20	3/8	86 Ft-Lbs. (11.9 Kg-M)
1/2-13	3/8	119 Ft-Lbs. (16.4 Kg-M)	1/2-20	3/8	133 Ft-Lbs. (18.4 Kg-M)
5/8-11	1/2	234 Ft-Lbs. (32.3 Kg-M)	5/8-18	1/2	267 Ft-Lbs. (36.9 Kg-M)
3/4-10	5/8	417 Ft-Lbs. (57.6 Kg-M)	3/4-16	5/8	467 Ft-Lbs. (64.5 Kg-M)
7/8-9	3/4	676 Ft-Lbs. (93.4 Kg-M)	7/8-14	3/4	742 Ft-Lbs. (102.5 Kg-M)
1-8	3/4	1,009 Ft-Lbs. (139 Kg-M)	1-12	3/4	1,126 Ft-Lbs. (155.6 Kg-M)
1-1/4-7	7/8	1,600 Ft-Lbs. (221 Kg-M)	1-1/4-12	7/8	1,800 Ft-Lbs. (248.8 Kg-M)
1-1/2-6	1	2,800 Ft-Lbs. (387 Kg-M)	1-1/2-12	1	3,000 Ft-Lbs. (414.6 Kg-M)

NOTE: These values are for Socket head cap screws only. Button heads,

Flat heads and Set screws have different values. Check the Allen

Hand Book for correct torque specifications.

