Liberty Fuels
757 Dragline Assembly

MEMSA Meeting
6-12-14
Liberty Fuels

757 Dragline Assembly

- Manufacturer: P&H
- Model: 757
- Year: 1991
- Operating Hours: 60K
- Location: Stobswood, England
- Machine Reassembly: April 2012
Liberty Fuels
757 Dragline Assembly

- Project Manhours
  - Assembly Contractor - 157,139
  - Electrical Contractor - 10,272
- Total Manhours - 167,411
- Project Completion - 100%
- Completion Date - 11-15-13
- LTA Accidents - 0
- MSHA Citations - 0
Liberty Fuels
757 Dragline
Operating Specifications

- Suspended Load: 375,000lbs
- Boom Length: 310ft
- Boom Height: 206ft
- Operating Radius: 286ft
- Dig depth: 180ft
- Dumping Height: 146ft
- Counter Weight: 1,050,000lbs
- Working Weight: 8,700,000lbs
- Tub Diameter: 64.5ft
- Shoe Size: 11.5ft x 69.5ft
- Running Rope 3-3/4in: Hoist 835ft, Drag 490ft
Liberty Fuels
757 Dragline Assembly

UK Coal
Stobswood, England
“Ace of Spades”
Liberty Fuels
757 Dragline Assembly

Dragline Naming Contest

Kemper County, Mississippi
Grade Schools

Naming Contest
Coloring Contest
Pizza Parties at “3” Grade Schools
Dragline Coloring Contest
“Winner”
Dragline Coloring Contest
“Winner”
Dragline Naming Contest

- Mr. Liberty
- Dino-Mite Dragline
- Abdominable Coal Man
- Get’er Done Dragline
- Big Bertha
- Draglinezilla
- Mick Dragger
- Super Duper Dirt Remover
- The Dragline Express
- The Klondike Claw
- The Coalinator
Dragline Naming Contest
“Winner”

LIBERTY BELLE
Liberty Fuels

757 Dragline Assembly

Dragline Disassembly

Stobswood, England

September 2007
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly

03.27.2008
Liberty Fuels
757 Dragline Assembly

04.16.2008
With any job communication is important. Working with an English workforce provided some interesting language differences. The following lists some “English” words and “American” translations.
<table>
<thead>
<tr>
<th>English</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shifting Spaner</td>
<td>Cresent Wrench</td>
</tr>
<tr>
<td>Bowser</td>
<td>Fuel Truck</td>
</tr>
<tr>
<td>Lorie</td>
<td>Truck – 18 Wheeler</td>
</tr>
<tr>
<td>Tip It</td>
<td>Load or Unload</td>
</tr>
<tr>
<td>Cherry Picker</td>
<td>Man Basket</td>
</tr>
<tr>
<td>Telli-Handler</td>
<td>Forklift</td>
</tr>
<tr>
<td>Pipper</td>
<td>Jackhammer</td>
</tr>
</tbody>
</table>
757 Dragline Relocation Project
England / USA
English / American Words

**English**
- Studing Material
- Windy Gun
- Windy Pipe
- Wellys
- Engine Room

**American**
- All-Thread
- Impact Wrench, Air Wrench
- Air Hose
- Rubber Boots
- Dragline Machine House
# 757 Dragline Relocation Project

**England / USA**

**English / American Words**

<table>
<thead>
<tr>
<th>English</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bendy Truck</td>
<td>Articulated Dump Truck</td>
</tr>
<tr>
<td>Dumpers</td>
<td>Enddump Truck</td>
</tr>
<tr>
<td>Universal Column</td>
<td>I-Beam</td>
</tr>
<tr>
<td>Bobbin</td>
<td>Hoist / Drag Drum</td>
</tr>
<tr>
<td>Oily Cog</td>
<td>Bullgear</td>
</tr>
<tr>
<td>Quickie</td>
<td>Track Torch</td>
</tr>
</tbody>
</table>
## 757 Dragline Relocation Project

**England / USA**

### English / American Words

<table>
<thead>
<tr>
<th>English</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>On The Dole</td>
<td>Laid Off</td>
</tr>
<tr>
<td>Hard Stand</td>
<td>Dragline Erection Site</td>
</tr>
<tr>
<td>Sleeper</td>
<td>Cribbing Tie</td>
</tr>
<tr>
<td>Pitman</td>
<td>Coal Miner</td>
</tr>
<tr>
<td>English</td>
<td>American</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Trainers</td>
<td>Tennis Shoes</td>
</tr>
<tr>
<td>Teley</td>
<td>Television</td>
</tr>
<tr>
<td>Mobile</td>
<td>Cell Phone</td>
</tr>
<tr>
<td>Dinner Jacket</td>
<td>Black Tie &amp; Tuxedo</td>
</tr>
<tr>
<td>Caravan</td>
<td>RV, Camper, Mobile Home</td>
</tr>
<tr>
<td>No Fly Tipping</td>
<td>No Littering</td>
</tr>
<tr>
<td>Round-A-Bout</td>
<td>Intersection From Hell</td>
</tr>
</tbody>
</table>
# English / American Words

<table>
<thead>
<tr>
<th>English</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biscuits</td>
<td>Cookies</td>
</tr>
<tr>
<td>Scone</td>
<td>Biscuit</td>
</tr>
<tr>
<td>Bacon</td>
<td>Ham</td>
</tr>
<tr>
<td>Streaky Bacon</td>
<td>Bacon</td>
</tr>
<tr>
<td>Bap</td>
<td>Breakfast Sandwich</td>
</tr>
<tr>
<td>Hagus</td>
<td>Food Stuffed in Blader</td>
</tr>
<tr>
<td>Black Puddin</td>
<td>Blood Sausage</td>
</tr>
<tr>
<td>Crisps</td>
<td>Potato Chips</td>
</tr>
</tbody>
</table>
English
- Cheers
- Champion
- Toodle Pip
- Geordie

American
- Thank You, Hello, Good Bye
- Good
- Good Bye
- Dialect, People From Northumberland
- A Fool, King George III 1788
<table>
<thead>
<tr>
<th><strong>English</strong></th>
<th><strong>American</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Carriage Way</td>
<td>Four Lane Highway</td>
</tr>
<tr>
<td>Flat</td>
<td>Apartment</td>
</tr>
<tr>
<td>Fag</td>
<td>Cigarette</td>
</tr>
<tr>
<td>Bum</td>
<td>Buttocks</td>
</tr>
<tr>
<td>Pinch</td>
<td>To Steal</td>
</tr>
<tr>
<td>Nicked</td>
<td>Arrested, Stolen, Caught</td>
</tr>
<tr>
<td>English</td>
<td>American</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Fortnight</td>
<td>2 Weeks</td>
</tr>
<tr>
<td>Stone</td>
<td>12 Pounds</td>
</tr>
<tr>
<td>MP – Member of Parliament</td>
<td>Congressman</td>
</tr>
<tr>
<td>Mum</td>
<td>Mother</td>
</tr>
<tr>
<td>Ado</td>
<td>Party</td>
</tr>
<tr>
<td>Adhesive Plasters</td>
<td>Band Aid</td>
</tr>
</tbody>
</table>
757 Dragline Relocation Project
Newcastle, England
757 Dragline Relocation Project
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757 Dragline Relocation Project
Newcastle, England
Liberty Fuels
757 Dragline Assembly
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06.01.2008
Liberty Fuels
757 Dragline Assembly
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757 Dragline Assembly

Dragline Assembly
Klondike, Mississippi
April, 2012
Concrete pad to set the dragline on is being poured.
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Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

This stack of supports on top of the jacks will be used for each step of the lowering sequence.
A series of 5ea – 400 ton hydraulic jacks are used in unison to lower the revolving frame in a very “controlled” manner.
Liberty Fuels
757 Dragline Rebuild
New Miner Training
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
A/C drives set into place.

The tugger winches are mounted into place.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Heating the drum lagging to normalize the metal.
Lagging of the hoist and drag drum is being reconditioned.
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757 Dragline Assembly

Grease Tanks
Liberty Fuels
757 Dragline Assembly

Lube Pumps being installed in the lube tanks.
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757 Dragline Assembly

The right side cab getting set into place.
Filter house section being set into place.
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757 Dragline Assembly

The dragline Electrical Substation being assembled.
Inside of the dragline standing on the front platform.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Setting the left shoe into place.
Once the shoe is in position the Walking Arm is attached.

New “shoe ball” and “shoe pin” have been installed in each shoe.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Safety cables installed.
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Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

757 Dragline
Upgrades & Modifications
Liberty Fuels
757 Dragline Assembly

Kevlar Mast
Safety Cables
Liberty Fuels
757 Dragline Assembly

Deck Walkways over the Swing Cases.
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757 Dragline Assembly

Boom Lighting ballast platform.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Hinged Boom
Light Brackets
Liberty Fuels
757 Dragline Assembly
Walkway Lights, Welding Lead, and 110v Receptacles have been installed on the A-Frame.
Extended walkway at top of Mast.
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757 Dragline Assembly

Aviation Lights and Walkway lighting at Boom Point.
Liberty Fuels

757 Dragline Assembly

Extended Backguards on Boom Ladders.
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757 Dragline Assembly

Installed new Boom Point Sheave Assembly.
Liberty Fuels

757 Dragline Assembly

Boom – Air, Welding Cables, Electrical Receptacles, Walkway Lights, Boom Point Camera, Boom Point Manual Lube Button.
Liberty Fuels
757 Dragline Assembly

Replaced existing Boom Feet.
Liberty Fuels

757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

New Intake Fan Motors, 50hz / 60hz.
Installed “14” Exhaust Fans.
Installed Bleeder Duct Fans.

Bleeder Fan Walkways and Access Ladders.
Liberty Fuels
757 Dragline Assembly

AC Convertor Drive Operating System.
Liberty Fuels
757 Dragline Assembly

AC Dragline Motors – IGBT Convertor Modules
Liberty Fuels – 757 Dragline

AC Hoist & Drag Motor

MAC 1024M – 1950HP

Hoist – 4ea
Drag – 4ea
Liberty Fuels

757 Dragline Assembly

Drag and Hoist motors (MAC 1024M).
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757 Dragline Assembly

Drive Motor - Disc Brakes.
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757 Dragline Assembly

AC Motor – No Commutator or Carbon Brushes like a DC Motor.
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757 Dragline Assembly

New Electrical MCC Panels.
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New High Voltage Switchgear.
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757 Dragline Assembly

AC Drives – Liquid Cooling System mounted on roof.
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757 Dragline Assembly

Walkway Safety Gates
Liberty Fuels
757 Dragline Assembly

Rebuilt Collector Rings, 11KV to 23KV.

High Voltage – Kirk Key System.
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757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly

Gearcase Rebuilds:
Combination of New and Used Gears.
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New Main Propel Bullgears.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Original Cab – 5ft Wider
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

2nd Cab
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

New Operators Chairs in both cabs.
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757 Dragline Assembly

Electrical Reels, Air Reels, Oxy/Act Reels.
Liberty Fuels

757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

New Lube Tanks
Liberty Fuels
757 Dragline Assembly

Lube System Control Panel
Liberty Fuels
757 Dragline Assembly

New Lube Injectors, Piping, Wiring.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Automatic Lube System installed on Roller Circle.
Liberty Fuels
757 Dragline Assembly
Safety Handrails have been installed above the Lube Tanks.
Liberty Fuels
757 Dragline Assembly

LED Lighting
Liberty Fuels

757 Dragline Assembly
Auxiliary Power Transfer Switch.

This switch will allow a portable generator to provide “auxiliary power” to the machine for “maintenance activates” when main power is disconnected.
Liberty Fuels

757 Dragline Assembly

Boom Point – Auxiliary Winch.
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757 Dragline Assembly

Tub Skirt – 18in.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Extended Shoes 10 feet.

Shoe Roller Guide System.

Shoe HandRails.

Shoe Access Compartments.
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757 Dragline Assembly

Shoe Extension
Liberty Fuels
757 Dragline Assembly

Completed Shoe
Installed 4.5 inch Upper & Lower Rail Pad.
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757 Dragline Assembly

New 4.5 inch Rail Pad.
Installed Hinged Tub Covers (safety modification).
Covers on the tub have been painted. Each cover will be “labeled”.

Each “tub compartment” will also be labeled.
Liberty Fuels
757 Dragline Assembly

New Upper & Lower Rails.
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757 Dragline Assembly

Added “Ten” Rollers to Roller Circle.

Decreased “roller load”.
Tool Storage under cabs.
Liberty Fuels

757 Dragline Assembly

Locker Room
Liberty Fuels
757 Dragline Assembly

Break Room – behind both Cabs.
Installed new flooring in the cabs.
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757 Dragline Assembly

Trailcable Entrance:
Installed Cable Clamps, Lightning Arrestors, Cable Connectors, and Kirk Key Interlocks.

Installed new Trailcable “support posts”.
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Modification
COSMET 9/20/13

Fan Tail - Auxiliary Hoist
Liberty Fuels
757 Dragline Assembly

Pull Cord Annunciator – Mounted under fantail, signals operator cabs.
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757 Dragline Assembly

Retractable Staircase both sides of machine.
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Bearing Temperature Monitoring System

Vibration Monitoring System
Liberty Fuels
757 Dragline Assembly

Doorways added to Propel Areas.
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757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly

New Drag Rope
Dirt Auger System.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Rebuilt Winch System – Relocated to rear of machine.
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757 Dragline Assembly

Fairlead Swivel Modification – Bearings to Bushings.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Rebuilt Gearcases
Liberty Fuels
757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

New “Fabricated” Drum Bullgears.
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757 Dragline Assembly

New Air Compressors
Liberty Fuels
757 Dragline Assembly

Electrical “Disconnect Switches” for all devices.
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Aluminum Deck Covers.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Drive Motor – Coupling Covers.
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Liberty Fuels
757 Dragline Assembly

New Center Pin Bushing and Upper Casting.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

False Floor – Ballast Compartment.
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Boom Lighting
Additional Boom Lights have been installed for better visibility and night time operation.
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757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Enhanced Exterior Lighting
Additional exterior lighting has been added for safer night time operating.
Liberty Fuels
757 Dragline Assembly

Boom is up and all new main support cables have been installed.

* Mast to Boom Point
* A-leg to Mast
* Boom Intermediate Cables
Walkways and handrails being installed on the left side of machine.
Liberty Fuels

757 Dragline Assembly
Safety
Handrails and doors are installed in the propel areas.
Remote operating controller for the Hoist and Drag Drums.

Both Drag and Hoist Drums can be remotely operated from inside the machinery house.

This is an added "Safety" function that is used when changing ropes.
Installing the overhead crane rail extensions.

Two 50 Ton Bridge Cranes will be used to removed the Hoist and Drag Drums.
Overhead crane rail extension.
Liberty Fuels

757 Dragline Assembly
Liberty Fuels

757 Dragline Assembly

Installed LED lights above and below each cab.
Liberty Fuels

757 Dragline Assembly
Walkways around the cabs are also being installed.
Windshield wipers installed on the cabs.
Lights and cameras have been mounted on the sides of both cabs.

Twelve cameras have been installed on the machine. The operator will have a display in each cab.

The cameras will also be used as part of a “Proximity Warning System”.

Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Light
Camera
Installed new Air Horns for both cabs.
Removable inspection covers have been installed in the Hoist & Drag drum bullgear guards.
Liberty Fuels
757 Dragline Assembly
Modification to the crane rail support at the rear of machine.

This brace was relocated in order to remove the hoist and drag drums with the overhead cranes.
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757 Dragline Assembly

The new “crane rail” supports have been installed.
Modification on the back door, removable bottom section.
The bottom section bolts in on each end.

We will remove this wall section when the hoist & drag “drums” have to be removed from the machine.
Liberty Fuels
757 Dragline Rebuild
Status Report 10-06-13
Liberty Fuels

757 Dragline Assembly

Installed a new 50Ton Bridge Crane. This unit replaced the original 40Ton Crane.
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757 Dragline Assembly

New Crane
Electrical “buss bar”.
New electrical track for the overhead cranes is being installed.
Liberty Fuels

757 Dragline Assembly

Replaced some of the covers with aluminum plate.
Safety Platforms have been installed under the bleeder fans.
Liberty Fuels

757 Dragline Assembly

Bleeder Fan
Safety Platforms.
Oil pans have been installed under each swing gearcase.
Grease pans installed on both of the propel gear cases.

Minimizes “grease mess” and “fire hazard” in the dragline house.
Liberty Fuels
757 Dragline Assembly

Grease Pan
Liberty Fuels
757 Dragline Assembly

Grease pan
Liberty Fuels
757 Dragline Assembly

Grease Drip Pan around Center Pin.
Installed “screens” for the back side of the hoist and drag drums.

Minimizes dirt, oil & grease from the drums from being thrown around the machine.
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757 Dragline Assembly

Installing the shoe guides.
Liberty Fuels
757 Dragline Assembly
Welding Lead Box being installed in the tub area.

This will allow welding to take place in the tub without having run welding lead from the top deck.
Similar Welding Lead Boxes have been installed throughout the machine.
A Safety Platform has been installed behind the hoist drum. This will be used when changing hoist ropes.

Slack Rope Limit Switch Sensors have been installed under both Hoist and Drag Drums.
Liberty Fuels
757 Dragline Assembly

Platform installed behind the hoist drum.
Installing metal guards around the electrical cabinets.
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757 Dragline Assembly

Auxiliary Supply Hoist has been installed.

A Safety Platform has been installed outside the rear lube room doors.
A Safety Gate has been installed on this platform.
The Auxiliary Supply Hoist has been installed in the Lube Tank area. This hoist can lift supplies from the ground to inside the machine.
Liberty Fuels
757 Dragline Assembly

New “air operated” Back Door Openers have been installed.

Also a new door operating control panel has been installed.
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757 Dragline Assembly

Installing the staircase lifting system.
Additional new Gearcase Oil Circulation Pumps have been installed on the Hoist, Drag, and Swing Gearcases.

Oil "flow meters" have been installed to help protect the Swing Case gears.
Installing cabinets and tool boxes on the machine.
New Welding Machines are being set into place.
Liberty Fuels
757 Dragline Assembly

Installed Welding Machine Cable Reels.
Liberty Fuels
757 Dragline Assembly

Areas under "both" cabs will be used for tool and equipment storage.
Liberty Fuels
757 Dragline Assembly

Tool Room under Left Cab
Safety gates added on each side of the machine just outside of the doors.

These types of “safety gates” are used throughout the machine to help protect personnel.
Liberty Fuels
757 Dragline Assembly

Modifications / Upgrades

- A/C Operating System
- Crane Upgrade – “2” 50 Ton Main Bridges
  - Radio Remotes, New Propel Cranes
- Camera System – (12) Locations
- Proximity System
- Boom Monitor System
- Production Monitor System
Liberty Fuels
757 Dragline Assembly

Modifications / Upgrades

- Electric Toilet
- PLC Control System
- Gearcase Oil Circulating System
- Rear Doors – New Operators
- Machine Performance Monitor
- Drum Slack Line Limit Switches
- Swing Pinion Loss Switches
Liberty Fuels

757 Dragline Assembly

Modifications / Upgrades

- Remote Hoist & Drag Drum Controls
- Operator – Power Setting Option
- Remote Telemetry / Wireless Communication
  - Email Alerts, Remote Troubleshooting
- Rear Deck Extension
- Roof Coating System
- Noise Reduction
Liberty 757 Startup

1. Verify that the LCB switches are closed on each side of the machine. Ensure that personnel in the house are clear of fans and machinery, and that everyone is aware of impending startup.

2. Check the AFE status below. If it is OK, the machine is ready for startup. Hold down the Machine Start pushbutton. The Load Circuit Breakers will close if they are not already closed, and the AFE will begin to charge as indicated by the Precharge lights below. The DC Voltage will increase as the AFE charges, and once approximately 1000VDC is reached the grid contactors will close.

3. Verify operation of the cooling system. One pump should be running for each Cooling Unit, and at least 2 fans should be running. Coolant levels should be checked if an alarm is indicated, and serviced immediately if low coolant is observed. Verify that flow is within specification.

4. All of the following systems should be running for normal digging operation. If any conditions are not met then they will need to be addressed before operation of the machine.
Diagnostics - Temperature

- Propel
- Swing
- Hoist
- Drag

All Readings are now in Fahrenheit
### Power Monitor 3000 Readings

<table>
<thead>
<tr>
<th></th>
<th>Phase A</th>
<th>Phase B</th>
<th>Phase C</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Line-Line Volts</td>
<td>23.132</td>
<td>22.974</td>
<td>22.863</td>
<td>22.990</td>
</tr>
<tr>
<td>AC Line Amps</td>
<td>132.45</td>
<td>114.73</td>
<td>129.11</td>
<td>126.33</td>
</tr>
<tr>
<td>kW</td>
<td>47865.05</td>
<td>47871.34</td>
<td>47874.71</td>
<td>47867.65</td>
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<tr>
<td>kVA</td>
<td>47871.34</td>
<td>47874.71</td>
<td>47874.71</td>
<td>47873.25</td>
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<tr>
<td>kVAR</td>
<td>47247.41</td>
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</tr>
<tr>
<td>Power Factor</td>
<td>99.86</td>
<td>99.86</td>
<td>99.86</td>
<td>99.86</td>
</tr>
<tr>
<td>Total Harmonic Distortion (%V)</td>
<td>2.09</td>
<td>2.09</td>
<td>2.09</td>
<td>2.09</td>
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<tr>
<td>Frequency (Hz)</td>
<td>59.94</td>
<td>59.94</td>
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</tbody>
</table>

- **kWh (net):** 857.25
- **kWh (reverse):** 8177.17
- **kW Demand:** 1433.18
### Readings - AFE

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<th>#1</th>
<th>#2</th>
<th>#3</th>
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<tbody>
<tr>
<td>AC Line Volts</td>
<td>668</td>
<td>669</td>
<td>668</td>
<td>670</td>
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<tr>
<td>AC Line Amps</td>
<td>473</td>
<td>475</td>
<td>453</td>
<td>450</td>
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<tr>
<td>DC Voltage</td>
<td>16.051</td>
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**IGBT Temp**

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<tbody>
<tr>
<td>IGBT Temp</td>
<td>82</td>
<td>84</td>
<td>86</td>
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**Watt/Var Ratio Reference**

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</table>
Readings - Hoist

Flanders AC Drives
Ready to Run: Enabled

IGBT Temps
- #1: 88
- #2: 97
- #3: 90
- #4: 90

Motor Amps | Motor Torque (% Stall) | Motor Speed (rpm) | Drive End Temp (C) | Brake End Temp (C) | Stator Winding Temp (C)
--- | --- | --- | --- | --- | ---
HM1 | 808 | 24 | 1114 | 86.9 | 144.8
HM2 | 8.15 | 24 | 38 | 45.6 | 94.4
HM3 | 820 | 25 | 1116 | 89.6 | 198.3
HM4 | 8.15 | 24 | 92 | 113.3 | 162

Hoist Drum Bearing Temp (C)
- Right: 83.1
- Left: 82.5

All Readings are now in Fahrenheit
Liberty Fuels

757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly
Liberty Fuels
757 Dragline Assembly

Questions?