**TECHNICAL SPECIFICATIONS**

**VERSALIFT TMD-2047-T Insulated derrick with turret mounted winch.**

**Digger including the following items (based on a 40 inch frame height):**

**BOOM ASSEMBLY** - The boom assembly consists of the lower boom, intermediate boom, upper boom, and extension system. The lower boom is constructed of high strength steel forming a 9.75 x 12.75 rectangular section. The intermediate boom is constructed of high strength steel forming an 8 x 10.13 rectangular section. The upper boom is constructed of high strength, fi lament wound, epoxy resin, fiberglass with a 7 x 9 rectangular section and incorporates a fiberglass tip. The extension system includes two double-acting hydraulic cylinders. Each cylinder incorporates dual counterbalance holding valves.

**BOOM LIFT CYLINDERS -** Dual double-acting cylinders equipped with dual counterbalance holding valves and self-aligning spherical bearing. Each cylinder is capable of fully supporting the rated lifting capacity of the derrick.

**TURNTABLE -** The fixture welded steel structure is constructed from 5/8” plate wings and a 1.5” thick base plate. The base plate is machined flat to support the rotation bearing.

**RIDING SEAT LOWER CONTROLS WITH SINGLE STICK -** Consists of a turntable mounted deck, seat, access ladder, and control console. Includes full pressure, full flow hydraulic controls with a single handle joystick for boom raise-lower, rotate, and intermediate boom extend-retract. Additional hydraulic valve levers are included to control winch, dig, upper boom extend, pole guide tilt, and pole claw open-close.

**ROTATION DRIVE -** Consists of a hydraulically driven worm and spur gear acting on a shear ball rotation bearing. The gearbox incorporates a load sense feature to measure the side loads applied to the boom.

**TURNTABLE WINCH -** The 15,000 lb. maximum capacity turntable winch consists of a worm gearbox, hydraulic motor, holding valve, and drum. At 40 gpm flow, the winch provides an average line speed of 35 fpm.

**WINCH LINE -** 1” diameter x 100 ft. Stable Braid.

**SWIVEL HOOK –** 7 ton rated swivel hook

**HYDRAULIC OVERLOAD PROTECTION** - The overload protection is purely hydraulic and uses no electronics or electrical components. The system senses the boom lift cylinder pressure and side loads at the rotation gearbox. When an overload condition is detected, the system disables the following: digger dig, winch raise, boom lower, upper boom extend, and intermediate boom extend.

**TRANSFERABLE POLE GUIDE -** Can be pinned to either the inner boom tip or the intermediate boom. The pole guide includes hydraulic tilt and hydraulic operation of the pole claws. Holding valves are included to lock both cylinders in position.

**POLE GUIDE INTERLOCK -** Prevents inner boom from extending unless either of the following conditions is satisfied: 1. The pole guide tilt is fully raised. 2. Or the pole guide is properly pinned to the upper boom.

**CONTINUOUS ROTATION -** Rotation is continuous and unrestricted in either direction.

**PINS, BEARINGS, AND LUBRICATION** - The main pivot and cylinder joints use high strength hard chrome plated steel pins with fiberglass reinforced Teflon non-lube bearings.

**HYDRAULIC SYSTEM -** Full hydraulic units operate on an open center hydraulic system while electrohydraulic (Radio remote controlled) units use a closed center system. This system operates at 2600 psi.

***Open Center*** – A tandem gear pump system supplies a combined 40 GPM for the digger and winch circuits and 15 GPM for the boom functions.

**OIL RESERVOIR -** 50 gallon bulkhead mount reservoir. Includes cleanout, 10 micron return filter that can be replaced without draining the reservoir, dipstick, 100 mesh (149 micron) suction screen, gate valve, and magnetic drain plug.

**INSULATION -** The fiberglass is certified for 46kV and below in accordance with ANSI A10.31 dielectric rating requirements.

**52 IN TALL PEDESTAL -** The pedestal is a fabricated steel structure incorporating a 1.5” thick top plate which is machined flat to support the rotation bearing.

**SUBFRAME -** The full length subframe is constructed of 6 x 6 square tubing and 5/16” plate. The pedestal mounts above the subframe allowing for possum belly storage. Shear plates are provided to attach to the vehicle frame.

**DIGGER ASSEMBLY -** Consists of the digger hanger and auger stow bracket. The digger hanger is automatically transferred from the lower boom to the intermediate boom when the auger is unstowed. The auger stow bracket includes an over-stow protection valve.

**DIGGER DRIVES -** Two speed 12,000/3,000 ft-lb. Digger Drive w/ 2-1/2 in. hex

**AUGERS - 18 in. auger with Rock Ripper Head**

**KELLY BAR -** 72 in. Kelly Bar (auger extension) for 2-1/2 hex drive to 2-1/2 auger

**AUGER STOW SLING -** 7/8” diameter synthetic rope.

**DIGGER/WINCH PRESSURE GAGE -** The pressure gage on the lower control panel senses the pressure generated while using the digger and winch.

**BOOM PRESSURE GAGE -** The pressure gage on the lower control panel senses the pressure generated while using the boom control valve.

**CUSTOM LOAD CAPACITY CHART -** Based on as built configuration.

**ENGINE START/STOP CONTROL -** Operated by a toggle switch at the lower controls.

**PAINTING** - The complete unit is primed and painted prior to assembly. The standard color is white urethane.

**MAIN A-FRAME OUTRIGGERS -** A-frame outriggers are designed and constructed from high-strength steel. At maximum extension the outriggers provide 158” (4.0 m) of spread and 7.9” of penetration based on a 40” (1.02 m) frame height. Outriggers are equipped with pilot operated check valves, internal thermal relief valves, and separate operating controls for each outrigger. Slide pads at each leg ensure smooth operation. The standard pivot feet swivel a minimum of 10 each way.

**AUXILIARY A-FRAME OUTRIGGERS -** A-frame outriggers are designed and constructed from high-strength steel. At maximum extension the outriggers provide 147.5” (4.0 m) of spread and 6.1” of penetration based on a 40” (1.02 m) frame height. Outriggers are equipped with pilot operated check valves, internal thermal relief valves, and separate operating controls for each outrigger. Slide pads at each leg ensure smooth operation. The standard pivot feet swivel a minimum of 10 each way.

**OUTRIGGER BOOM INTERLOCK SYSTEM** - The outrigger/boom interlock system is designed to prevent the boom from operating until the outriggers contact the ground. It also prevents the outriggers from being retracted before the boom is properly stowed.

**OUTRIGGER MOTION ALARM** - An alarm will sound while the outriggers are in motion.

**SLOPE INDICATORS** - Slope indicators are required on Versalift units and supplied by Time Manufacturing Co. Slope indicators shall be installed to indicate the level of rotation bearing relative to the ground.

**TOOL/POLE PULLER TOOL CIRCUIT -** Consists of a hydraulic sectional valve with integrated adjustable flow control and pressure relief. The 3-position control valve allows operation of a tamper or pole puller, while still allowing operation of the digger at the same time.

**MANUALS** - Two (2) Operator’s Manuals, two (2) Service Manuals, one (1) Manual of Responsibilities, and one (1) EMI Safety Manual are included with each aerial lift.

**CHASSIS SPECIFICATIONS**

* 2024 Peterbilt 537 4X4 Chassis
* See attached chassis specifications

**BODY SPECIFICATIONS**

**Steel Line Body:**

156" Line body 54 inches high X 94 inches wide.

**Body Dimensions:**

* 18 Inch compartment depth.
* 58 Inch bed area.
* 30 Inch top of floor to top of body.
* 24 Inch horizontal compartment height.

**Body Materials:**

* 12 Ga Treadplate Wheel wells.
* 16 Ga. body materials.
* 12 Ga. Hot rolled treadplate floor.
* 12 Ga. Hot rolled treadplate compartment tops.

**Door Details:**

* Stainless Steel Automotive rotary type door latches
* Latch Covers on All doors.
* Stainless steel rod and socket type door hinges.
* Chain stops on all doors.
* Double Panel Body Doors.

**Body Features:**

* Rubber rolled crown type fenders.
* Master door lock system.
* Automotive Bulb Type Weatherstripping.
* Front bulk-head.
* Shelving / Hooks installed on Dual Uni-Strut for infinite adjustment.
* Mud Flap brackets

**Streetside Compartmentation:**

**1st Vertical:**

* 24 Inches wide with Five (5) fixed material hooks 1-3-1.

**2nd Vertical:**

* 24 Inches wide with Two (2) shelves each with adjustable dividers on 4" centers.

**3rd Vertical:**

* 24 Inches wide with Two (2) shelves each with adjustable dividers on 4" centers.

**Horizontal:**

* 60 Inch open compartment.
* Adjustable dividers installed in compartment bottom on 4" centers.

**Rear Vertical:** (47" High)

* 24 Inches wide with Five (5) fixed material hooks 1-3-1

**Hotstick Shelf:**

* 156 Inches long with rear dropdown access door.

**Curbside Compartmentation:**

**1st Vertical:**

* 24 Inches wide with Five (5) fixed material hooks 1-3-1.

**2nd Vertical:**

* 24 Inch wide gripstrut access steps to bed area.

**3rd Vertical:**

* 24 Inches wide with Two (2) shelves each with adjustable dividers on 4" centers.

**Horizontal:**

* 60 Inches wide with One (1) shelf with adjustable dividers on 4" centers.

**Rear Vertical:** (47" High)

* 24 Inches wide with Five (5) fixed material hooks 1-3-1.

**Tailshelf:**

* Treadplate tailshelf 30 inches long X Full width of body x 6 inches high
* 7-Lamp light bar installed at rear.

**Rear Lighting L.E.D in Tailshelf:**

* Rubber mounted recessed rear lighting kit with harness
* Two (2) stop/tail/turn lights - Peterson Brand M826R-7 L.E.D.
* Two (2) clear back up lights - Peterson Brand M826C - 7 LED
* Two (2) front clearance lights reflector style- Peterson brand M173A L.E.D
* Two (2) side clearance lights reflector style- Peterson brand M173R L.E.D
* Two (2) rear clearance lights reflector style - Peterson brand M173R L.E.D
* Three (3) light center cluster reflector Style - Peterson brand M173R L.E.D

**Wheel Chock Storage:**

* Two each side built into body wheel wells.
* Pendulum Retainers.

**Outrigger Pad Storage:**

* Four (4) Outrigger Pad Storage Brackets
* Pendulum Retainers.

**Outrigger Control Boxes:**

* Two (2) Dual outrigger control boxes.

**Access Steps:**

* One (1) Double Belted type access step under the tailshelf, top step to be fixed - Curbside.
* One (1) Belt type access step under the CS access step.

**Grab Handles:**

* Two (2) Each 11" Weld-On Type at side access of body.
* Two (2) Pool type grab handles top of tailshelf.
* One (1) Standard and One (1) Mini

**Paint:**

* Prime Paint Gray Interior
* Rubberized protective undercoating.

**INSTALLATION DETAILS**

* Furnish and install mounting hardware, PTO, and tandem gear pump
* Install VERSALIFT TMD-2047-T
* Furnish and install hydraulic diagnostic test ports
* Furnish and install body and accessories
* Furnish and install park brake interlock
* Furnish and install slope indicators
* Furnish and install backup alarm
* Furnish and install quick disconnects with dust caps at the ground tool circuit
* Furnish and install an electronic brake controller
* Furnish and install emergency gladhands
* Furnish and install a 3-point grounding system
* Furnish and install a grounding reel including 50 ft. of 1/0 cable, grounding clamp, ball stop, and ferrule
* Furnish and install a hydraulic hose reel with 50’ of dual hose, ball stop, and quick disconnect fittings.
* Furnish and install two (2) LED amber beacons, mounted one each side of the boom rest.
* Furnish and install an ICC bumper
* Furnish and install a pintle plate with D-ring each side
* Furnish and install a 15 ton pintle hook
* Furnish and install both a 7 prong and 6 prong trailer receptacles
* Furnish and install a rider seat access step
* Furnish and install mud flaps
* Furnish and install travel height decal in the cab
* Furnish and install a single pole rack
* Furnish and install an additional stop/start switch at the rear of the body
* Paint body to match cab and chassis
* Paint treadplate floor with black no-skid
* Furnish four (4) 24” X 24” X 2” wood outrigger pads
* Furnish a 5lb fire extinguisher and a 3-piece triangle reflector kit
* Furnish two (2) rubber wheel chocks
* Test ride completed unit for 1 hour
* Test and Certify per ANSI A92.2

Vehicle Summary Specifications

