

SPECIFICATIONS

TEL-N/NE GENERAL SPECIFICATIONS

The Versalift TEL-29-N aerial device provides a side mounted single man platform. The Versalift TEL-29-NE aerial device provides an end mounted single man platform. The following is a brief description of the major components of the TEL-N and TEL-NE aerials.

PLATFORM - The standard fiberglass platform is 24 in X 24 in. X 42 in. (.61 m X .61 m X 1.07 m) with a step-through opening for easy access. The maximum platform capacity is 350 lbs. (160 kg) for side mounted and end mounted platforms. Leveling is gravity actuated with a hydraulic dampener, travel limit stops, and a spring loaded pin lock. Hydraulic leveling is standard on the TEL- NE (end mounted platform) and optional on the TEL-N (side mounted platform). Walk-in platforms, splicing platforms, and rotating splicing platforms are also available.

PERSONNEL RESTRAINT SYSTEM - A safety belt or harness and a lanyard are required and can be supplied by TIME Manufacturing Company at an additional cost. Consult applicable work practices and regulations to choose between a safety belt and a harness. The anchor for the lanyard is attached to the upper platform support.

OUTER/INNER BOOM ASSEMBLY - The major components of the outer/inner boom assembly include an outer boom, a telescoping inner boom, an extension cylinder, a hose carrier system, and slide pads mounted on the inner and outer boom.

The outer boom consists of an 6 in. X 8 in. (152 mm X 203 mm) rectangular steel section. The telescoping inner boom consists of a 5 in. X 7 in. (127 mm X 178 mm) rectangular aluminum section. The inner boom does not have to be removed to service the extension cylinder or slide pads.

The extension system consists of a hydraulic cylinder with wear rings on the piston and end gland and a holding valve mounted to the cylinder base. The hose carrier system is a multi-link assembly with adequate space to carry hoses and wiring to the upper control station.

Ultra high molecular weight plastic slide pads mounted on the inner boom can be changed without removing the inner boom. The outer boom side and top slide pads are infinitely adjustable and the lower pad can be replaced without removing the inner boom. The telescoping outer/inner boom assembly articulates from 14° below horizontal to 74° above horizontal. A double acting cylinder, equipped with a

counter balance holding valve provides boom elevation.

A boom support cradle and a ratchet-type boom tie down strap are included.

TURRET - The turret wings are 1/2 in. (13 mm) thick steel plate. A steel tube is welded between the turret wings to support the boom cylinder and provide rigidity. The turret plate is machined flat to support the rotation bearing. A bearing cover is provided to prevent foreign material from interfering with lift rotation.

ROTATION - Rotation is 360° non-continuous with an electric limit switch to prevent hose and wiring damage. Continuous unrestricted rotation is available as an option (see option descriptions). Rotation is accomplished by a hydraulically driven worm and spur gear and a shear-ball rotation bearing. The critical bolts holding the turret to the rotation bearing and the rotation bearing to the pedestal meet SAE grade 8 specifications. These critical bolts are Torque Seal Marked to provide a quick means to inspect for loosening. An adjustment screw is provided to adjust pinion and rotation gear clearances.

PEDESTAL - The standard pedestal is a rectangular shape with an access door on one side. The hydraulic reservoir is built into the pedestal. A 100 mesh suction strainer, 10 micron return filter and shut off valves are located inside the pedestal. The top plate of the pedestal is 1-1/4 in. (32 mm) thick and machined flat to support the rotation bearing. Extended and bridge mount pedestals are available (see option descriptions).

LUBRICATION - Non-lube bearings are used at all points of motion. The rotation bearing is the only component that requires lubrication.

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

HYDRAULIC OIL RESERVOIR - Designed as an integral part of the pedestal, the reservoir has an anti-splash baffle and easy-to-read fluid level gauges. The total volume of the reservoir is 8 gallons (30.3 l) with a 7 gallon (26.5 l) oil capacity.

CYLINDERS - The extension cylinder has wear rings on the piston and end gland for extended seal life. A double acting holding valve is mounted at the extension cylinder base to prevent boom creep during travel or uncontrolled movement in case of hydraulic

hose failure. The extension cylinder can be removed without removing the inner boom. A hydraulic regeneration feature on the extension cylinder provides extension and retraction at approximately the same speed. The boom elevation cylinder has a single acting holding valve.

BOOM AND CYLINDER PINS - Pins are high strength alloy steel and chrome plated for a hard finish and corrosion resistance. Cylinder pins are held in place with a Torque-Seal marked bolts at one end and a pin cap bolted to the end.

CONTROL VALVE - The system pressure relief, hydraulic leveling (standard on TEL-NE), two speed (option), variable speed (option), and the electric/hydraulic boom function valves are a single integrated system and mounted on the turret wing. Electric lower controls which override the upper controls are located below rotation.

UPPER CONTROL - On the TEL-N (side mounted platform) all switches are recessed into the inner boom. The TEL-NE (end mount platform) has the control panel mounted inside the platform (an outside the platform control panel is available as an option). To protect against inadvertent operation, a spring loaded master control switch is provided. Boom function switches are self-centering, weather resistant, and are located in a logical sequence for the operator. Engine stop and start is one dual action switch. The engine stop is an instant kill circuit. GFCI receptacle (120 V power) and optional pneumatic circuits (1 or 2) are located at the end of the boom.

HYDRAULIC SYSTEM - The open center hydraulic system operates at 2000 PSI (141 kg/cm²) at 2 GPM (8 LPM). The pump draws oil through a 100 mesh suction strainer that is equipped with a bypass valve. A 10 micron return filter with shut-off valve is included. Sight gauges are furnished for checking fluid level. This system can be powered by the chassis engine, a chassis transmission power take off, a separate engine/generator package or an electric motor (see option descriptions).

ENGINE START/STOP - The start/stop system has been designed so that the lift cannot be operated normally unless the Versalift power switch is activated and the truck ignition is in the "on" position. This feature makes it difficult for unauthorized individuals to operate the lift when the truck is locked. Start/stop controls are located at the upper and lower control stations.

MANUALS - Two operator's manuals and two service manuals are included with each TEL-N and TEL-NE

aerial lift.

TEL-N/NE OPTION SPECIFICATIONS

Below is a brief description of some of the available options for the TEL-N and TEL-NE aerial lift.

BRIDGE MOUNT PEDESTALS - These pedestals allow for a 26-1/4 in. x 25-1/2 in. (.67m x .65m) or a taller 26-1/4 in. x 32-1/2 in. (.67m x .83m) unobstructed truck body tunnel from street side through to the curb side. Special mounting hardware is included. The 10 gallon (38 l) poly reservoir is mounted on the bridge structure. A 100 mesh suction filter and spin-on 10 micron return line filter are included.

CONTINUOUS ROTATION - Rotation is continuous and unrestricted in either direction. An electric and hydraulic collector assembly provides a path for hydraulic oil and electric signals from the pedestal to turret. This option is available on all pedestals.

HYDRAULIC LEVELING - Platform leveling is controlled automatically by a master and slave cylinder arrangement. The platform leveling system can be manually activated from the upper or lower controls to level the platform, to stow and unstow the platform, or to tilt the platform for clean out and rescue. While optional on the TEL-N (side mounted platform), this feature is standard on the TEL-NE (end mounted platform).

EMERGENCY POWER - An auxiliary hydraulic pump designed to bring the booms down in case the main hydraulic source fails. This system consists of a hydraulic pump driven by a DC motor, which is powered by the truck engine battery. The system is connected in parallel with the main pump and is designed for non-continuous operation. Toggle switches are used to energize the system at the upper and lower controls. Emergency power is only available when the primary power source is not operating.

EMERGENCY LOWERING - This system consists of an electric solenoid valve attached to the lower boom cylinder. When actuated at the upper controls, the valve opens and allows the boom to slowly bleed down.

TORSION BAR - Over frame and under frame torsion bars are available and add to the stability of the vehicle. All Stable Ride torsion bars include rubber bushings at all points of movement and do not require lubrication.

PNEUMATIC CIRCUIT(S) TO THE PLATFORM -

This system consists of one or two air lines from the pedestal to ports at the end of the inner boom.

EXTRA CONTROL CIRCUIT FROM THE PLATFORM -

Consists of an additional toggle switch at the platform. The number of additional control circuits available depends on the number of control options selected.

TWO-SPEED MANUAL THROTTLE CONTROL -

Gives the operator a choice of efficient, economical engine idle speed or a preset higher engine speed when operating hydraulic tools.

VARIABLE SPEED CONTROL -

This option is designed as an integral part of the control valve on the TEL-N and TEL-NE aerial devices. The inlet flow to the four way control valve is regulated from no flow to maximum flow by a flow control valve. The controls include the same switches to control the lift functions with a rotational control knob to regulate the speed of operation. The upper control arrangement on the TEL-N stays basically the same with the exception of the addition of the variable speed control switch, and the removal of the master control push button switch. The upper control arrangement on the TEL-NE includes a control housing installed on the outside of the platform.

HYDRAULIC PUMP POWER SELECTION -

Various systems are available to power the TEL-N and TEL-NE aerial devices. All orders must include one of the following selections and additional information on the chassis engine, transmission, and air conditioning options. Not all chassis will accept a belt-drive and/or a power-take-off.

A belt drive variation includes an electric clutch/pump assembly for mounting on the engine accessory belt drive. Consult factory installation information for details. Chassis with air conditioning may not be suitable for this option.

A power-take-off may be used and is installed on the chassis transmission. Some chassis with automatic transmissions will not accommodate this drive option.

A 5,500 or 7,000 watt engine generator with extended shaft driving the hydraulic pump is available.

An electric motor drive for the hydraulic pump is also available.

MANUAL PLATFORM ROTARY POSITIONER -

This feature is designed to allow the platform to be positioned manually while the platform is level and

not loaded. A spring-loaded pin locks the platform in one of nine positions over a 180° range. This rotary positioner is only available on the TEL-NE (end-mounted platform)

PLATFORM VARIATIONS - The standard platform has a step through opening. The following platform options are available.

The step through splicing platform and walk-in splicing platform can be equipped with door, top, tent, seat, heater, accessory cavity, tool pouches, and splicing machine stand. The side mounted walk-in rotating splicing platform can be equipped with door, top, tent, heater, tool pouches, and splicing machine stand. This option is not available on the TEL-NE. Hydraulic leveling is required. The capacity for the rotating splicing platform is restricted to 300 lbs. (136 kg).

An open square steel platform is available.

The TEL-NE can be equipped with a 24 in. X 30 in. X 42 in. (.61 m X .76 m X 1.07 m) step through or walk-in platform.

The reverse mount platform is mounted on the opposite side of the boom. This orients the platform to the curb side when the aerial is stowed to the front and mounted over the rear axle. Hydraulic leveling is recommended with this platform option. The extended pedestal may be required for chassis clearance.

CAPACITY VARIATIONS - Standard platform capacity is 300 lbs. (136 kg). A maximum of 350 lbs. (160 kg) can be specified on either the TEL-N or TEL-NE. Increased curb weight may be required for stability with the 350 lb. (160 kg) capacity. The 350 lb. (136kg) capacity is not available with the walk-in rotating splicing platform.

VINYL PLATFORM COVER - A 24 in. X 24 in. (.61 m X .61 m) and a 24 in. X 30 in. (.61 m X .76 m) soft vinyl cover is available.

UPPER CONTROL COVER - A hinged cover protects the upper controls from exposure to the weather (TEL-N only).

TALLER PEDESTAL - A 6 in. (152 mm) and 12 in. (305 mm) taller pedestal are available on the TEL-N or TEL-NE for increased cab clearance.

120V HOUR METER - This option is available with the engine driven generator power source and the electric drive power source.



REMOTE LOWER CONTROL - This option allows remote operation of the aerial device. The remote lower controls override the upper controls and are housed in a weather-resistant metal box.

TEL-29-N DIMENSIONAL SPECIFICATIONS

SPECIFICATIONS

| | |
|--|-----------------------|
| Horizontal Reach | 20 ft. 8 in. (6.30 m) |
| Maximum Rated Platform Capacity | 350 lbs. (160 kg) |
| Standard Rated Platform Capacity | 300 lbs. (136 kg) |
| Outer Boom Travel | -14° to +74° |
| Inner Boom Extension | 116 in. (2.95 m) |

Standard Pedestal¹

| | |
|---|-------------------------|
| Height to Bottom of Platform | 28 ft. 11 in. (8.81 m) |
| Working Height | 33 ft. 11 in. (10.34 m) |
| Stowed Travel Height | 9 ft. 9 in. (2.97 m) |
| Weight of Lift w/ Mounting Hardware | 1440 lbs. (653 kg) |

6 in. (152 mm) Taller Pedestal¹

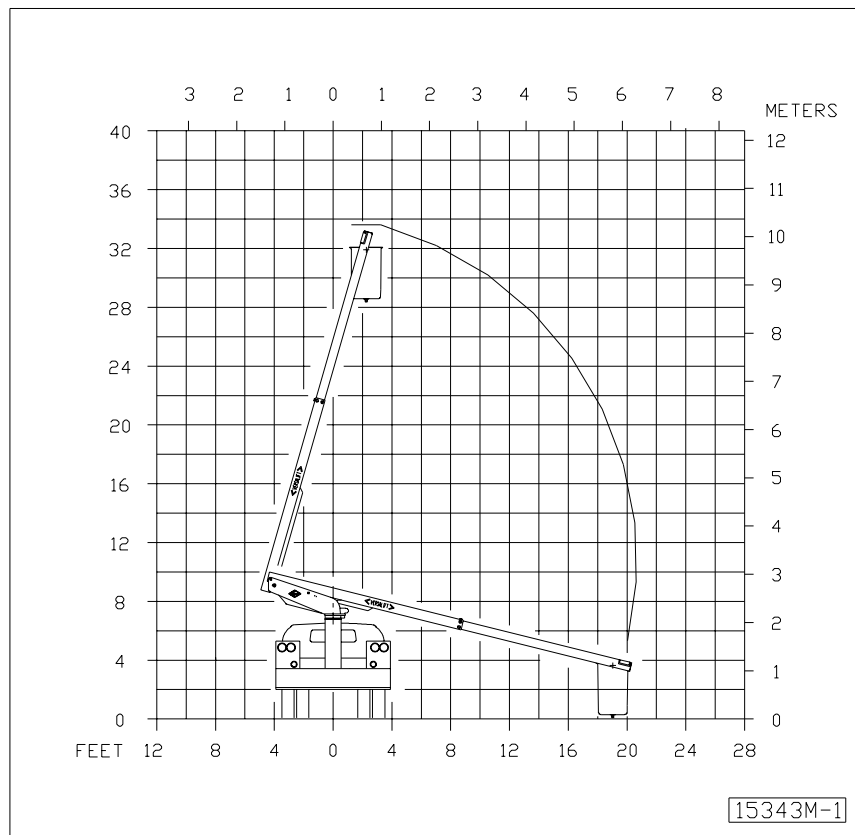
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|---|------------------------|
| Height to Bottom of Platform | 29 ft. 5 in. (8.97 m) |
| Working Height | 34 ft. 5 in. (10.50 m) |
| Stowed Travel Height | 10 ft. 3 in. (3.12 m) |
| Weight of Lift w/ Mounting hardware | 1465 lbs. (664 kg) |

12 in. (305) Taller Pedestal¹

| | |
|---|-------------------------|
| Height to Bottom of Platform | 29 ft. 11 in. (9.12 m) |
| Working Height | 34 ft. 11 in. (10.64 m) |
| Stowed Travel Height | 10 ft. 9 in. (3.28 m) |
| Weight of Lift w/ Mounting hardware | 1490 lbs. (676 kg) |

Ambient Temperature Range for Structural Integrity -40°F (-40°C) to 125°F (52°C)

¹Heights based on 40 in. (1.02 m) frame height with bottom of pedestal mounted 5 in. (127 mm) above the top of the frame.

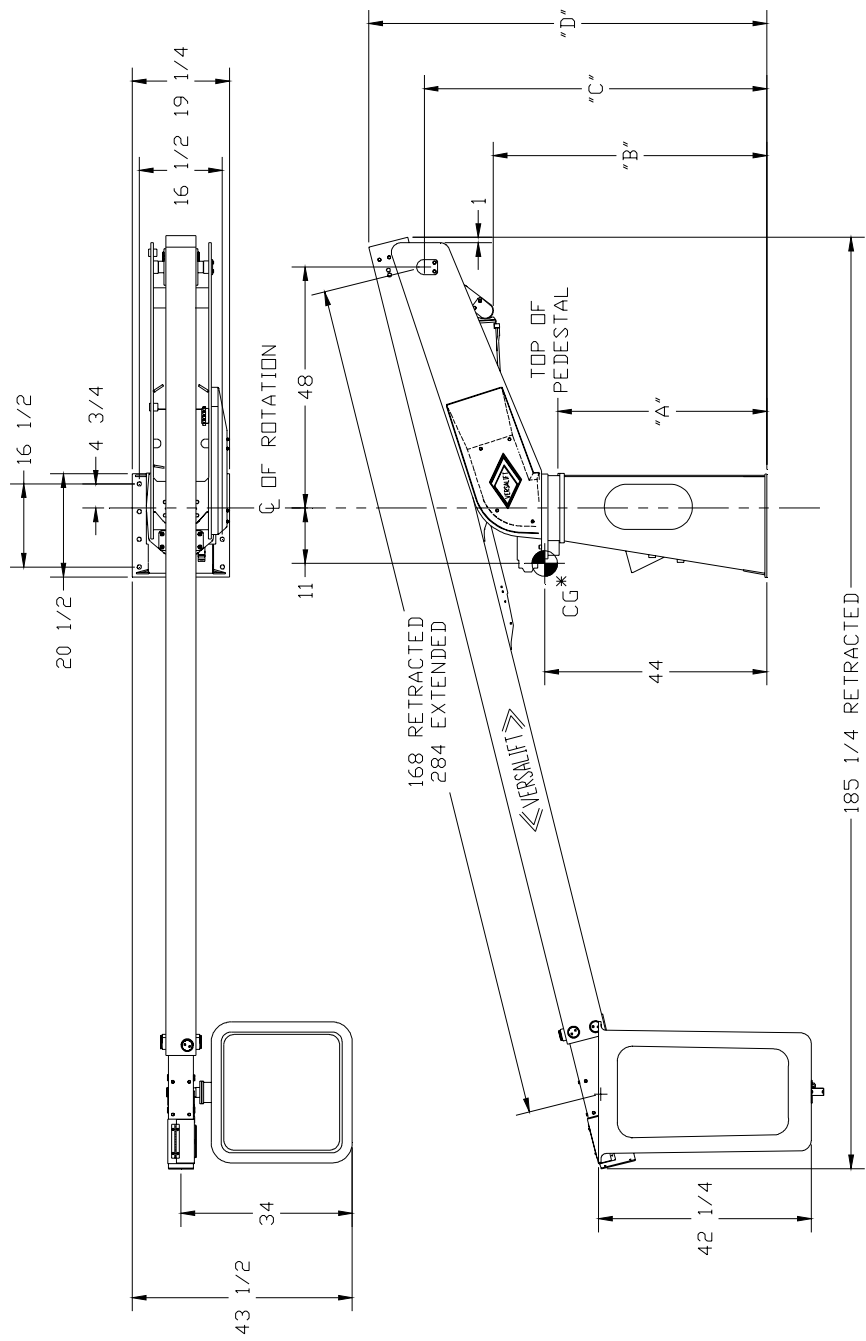


**TEL-29-N
Platform Travel**



SPECIFICATIONS

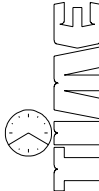
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| REV. | ERCN NO. | DESCRIPTION | BY | APPR. | DATE |
| (A) | 51285 | ADDED SHEET 2 | JKH | KK | 5/5/00 |



* STANDARD PEDESTAL ONLY

| PEDESTAL | "A" | "B" | "C" | "D" | WEIGHT |
|---------------|--------|--------|-----|-----|--------|
| STANDARD | 41 1/2 | 54 1/4 | 68 | 79 | 1360 |
| 6 IN. TALLER | 47 1/2 | 60 1/4 | 74 | 85 | 1385 |
| 12 IN. TALLER | 53 1/2 | 66 1/4 | 80 | 91 | 1400 |

SHEET 1 OF 2

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|---|----------|----------|
|  MANUFACTURING COMPANY WACO, TEXAS | DATE | TITLE |
| | 6-19-95 | TEL-29-N |
| | OVERALL | |
| SCALE | DWG. NO. | 15387-1 |
| 1=35 | | |



TEL-29-NE DIMENSIONAL SPECIFICATIONS

SPECIFICATIONS

| | |
|--|-----------------------|
| Horizontal Reach | 22 ft. 7 in. (6.88 m) |
| Maximum Rated Platform Capacity | 350 lbs. (160 kg) |
| Standard Rated Platform Capacity | 300 lbs. (136 kg) |
| Outer Boom Travel | -14° to +74° |
| Inner Boom Extension | 116 in. (2.95 m) |

Standard Pedestal¹

| | |
|---|-----------------------|
| Height to Bottom of Platform | 29 ft. 9 in. (9.07 m) |
| Working Height | 34 ft. 9 in. (10.6 m) |
| Stowed Travel Height | 9 ft. 9 in. (2.97 m) |
| Weight of Lift w/ Mounting Hardware | 1460 lbs. (662 kg) |

6 in. (152 mm) Taller Pedestal¹

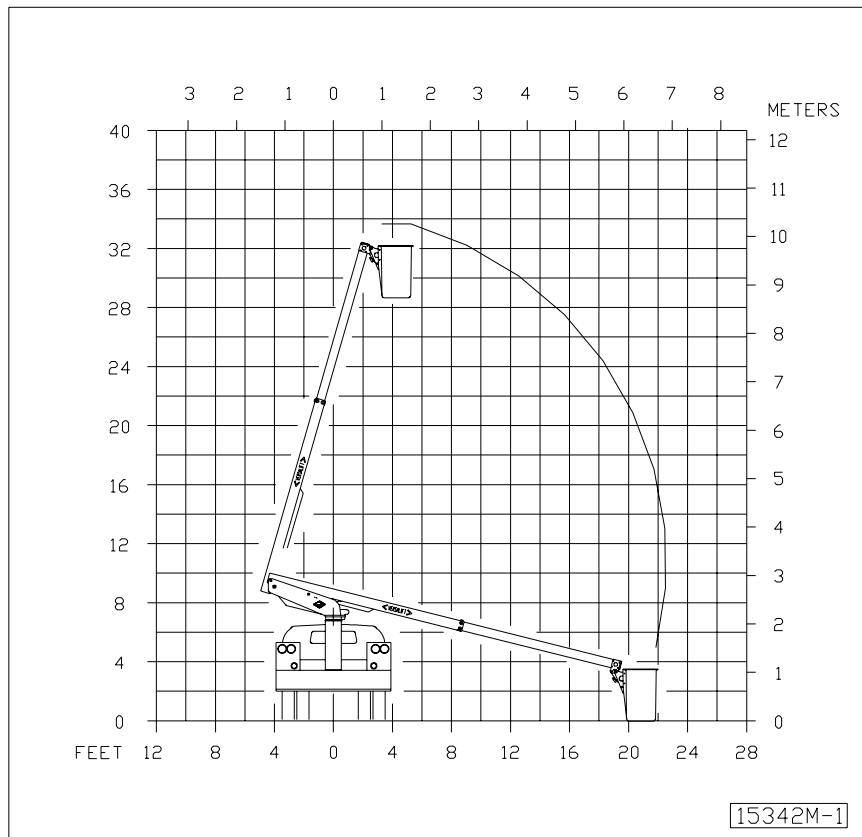
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|---|------------------------|
| Height to Bottom of Platform | 30 ft. 3 in. (9.22 m) |
| Working Height | 35 ft. 3 in. (10.74 m) |
| Stowed Travel Height | 10 ft. 3 in. (3.12 m) |
| Weight of Lift w/ Mounting hardware | 1485 lbs. (674 kg) |

12 in. (305 mm) Taller Pedestal¹

| | |
|---|-----------------------|
| Height to Bottom of Platform | 30 ft. 9 in. (9.37 m) |
| Working Height | 35 ft. 9 in. (10.9 m) |
| Stowed Travel Height | 10 ft. 9 in. (3.28 m) |
| Weight of Lift w/ Mounting hardware | 1510 lbs. (685 kg) |

Ambient Temperature Range for Structural Integrity -40°F (-40°C) to 125°F (52°C)

¹Heights based on 40 in. (1.02 m) frame height with bottom of pedestal mounted 5 in. (127 mm) above the top of the frame.

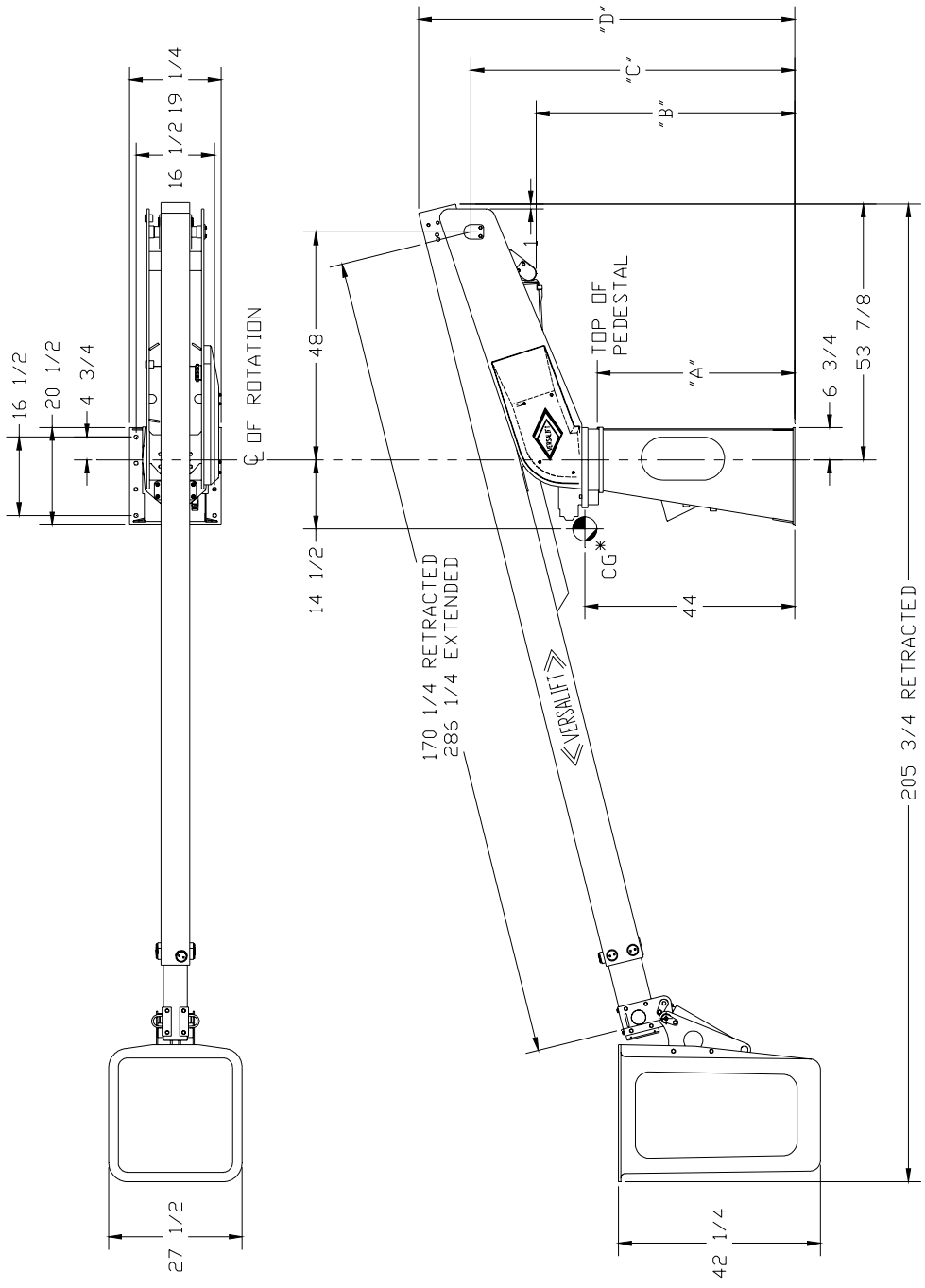


**TEL-29-NE
Platform Travel**



SPECIFICATIONS

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|---------------|---------------|-----|-------|--------|
| REV. ERMN NO. | DESCRIPTION | BY | APPR. | DATE |
| (A) 51285 | ADDED SHEET 2 | JKH | KK | 5/5/00 |



| PEDESTAL | "A" | "B" | "C" | "D" | WEIGHT |
|---------------|--------|--------|-----|-----|--------|
| STANDARD | 41 1/2 | 54 1/4 | 68 | 79 | 1380 |
| 6 IN. TALLER | 47 1/2 | 60 1/4 | 74 | 85 | 1405 |
| 12 IN. TALLER | 53 1/2 | 66 1/4 | 80 | 91 | 1430 |

* STANDARD PEDESTAL ONLY.

SHEET 1 OF 2

| | | | |
|---|----------|---------|-----------|
| MANUFACTURING COMPANY WACO TEXAS | DWN. BY | DATE | TITLE |
| | CKR | 6-16-95 | TEL-29-NE |
| | CHKD. BY | DATE | OVERALL |
| APPR. BY | DATE | | |
| SCALE | DWG. NO. | | |
| 1=35 | 15386-1 | | |



TEL-29-N/NE VEHICLE SPECIFICATIONS

Recommended Chassis Mounting With Torsion Bar:

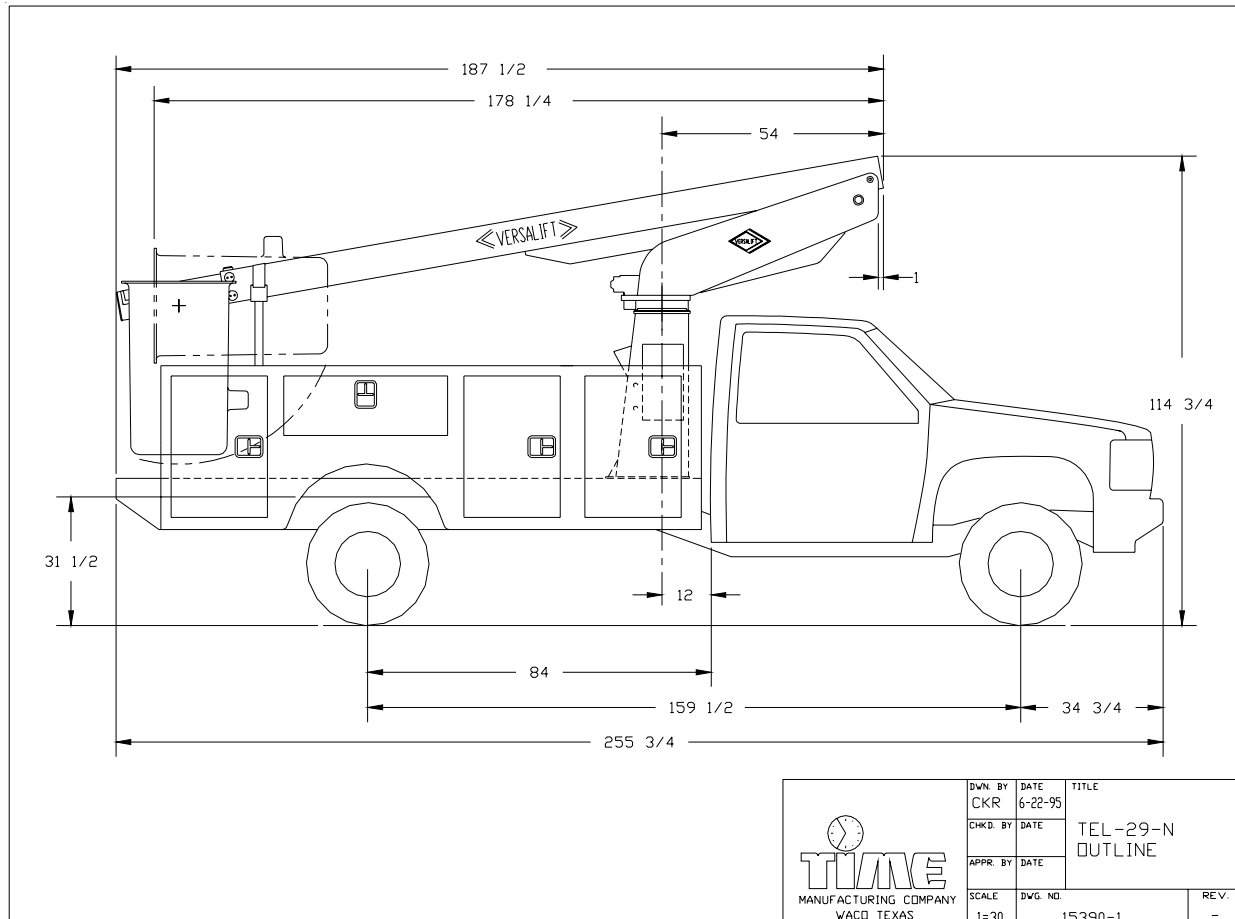
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|---|---|
| Minimum Cab to Rear Axle Dimension | 60 in. (1.52 m) |
| Minimum Frame Section Modulus | 5.4 in ³ (88 cm ³) |
| Min. Frame Resisting Bending Moment | 195,000 in.-lbs. (22035 N-m) |
| Approximate Curb Weight for Stability | 7500 lbs. (3410 kg) |

| | |
|---------------------------------|-----------------------|
| GAWR ¹ | 14,500 lbs. (6577 kg) |
| GAWR ² (FRONT) | 5,000 lbs. (2268 kg) |
| GAWR ² (REAR) | 9,500 lbs. (4309 kg) |

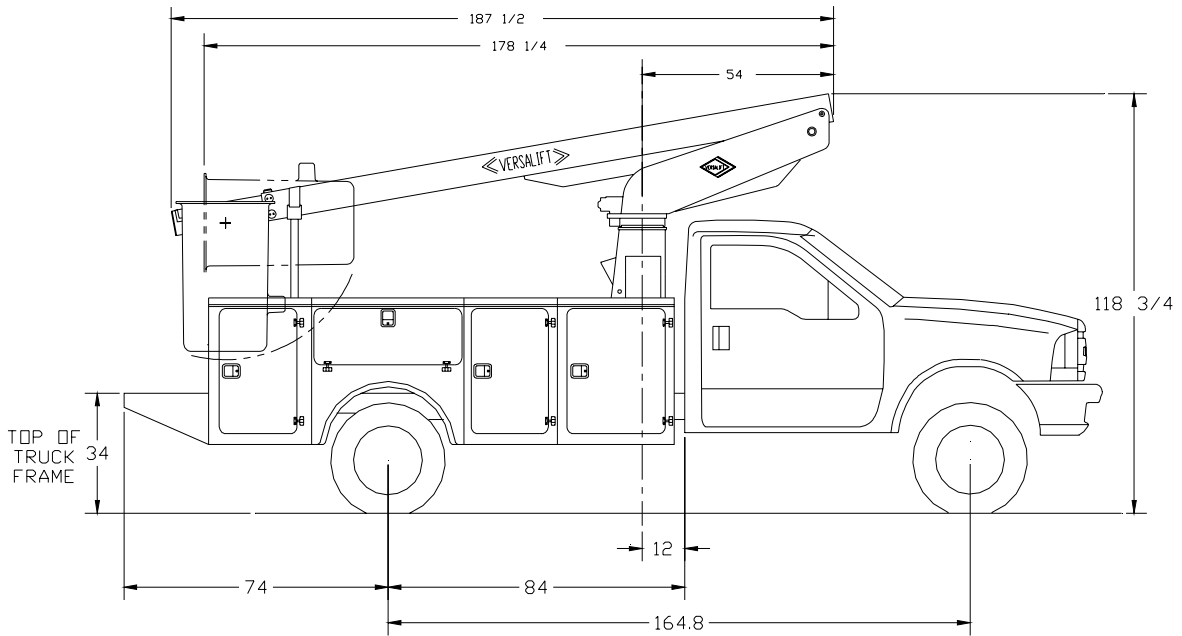
NOTE: Actual curb weight for stability and required GVWR and GAWR can vary significantly with chassis stiffness, suspension stiffness, chassis CA, lift mounting location, service body, accessories, ballast (if required), platform capacity, and desired payload.

¹GVWR - Gross Vehicle Weight Rating

²GAWR - Gross Axle Weight Rating



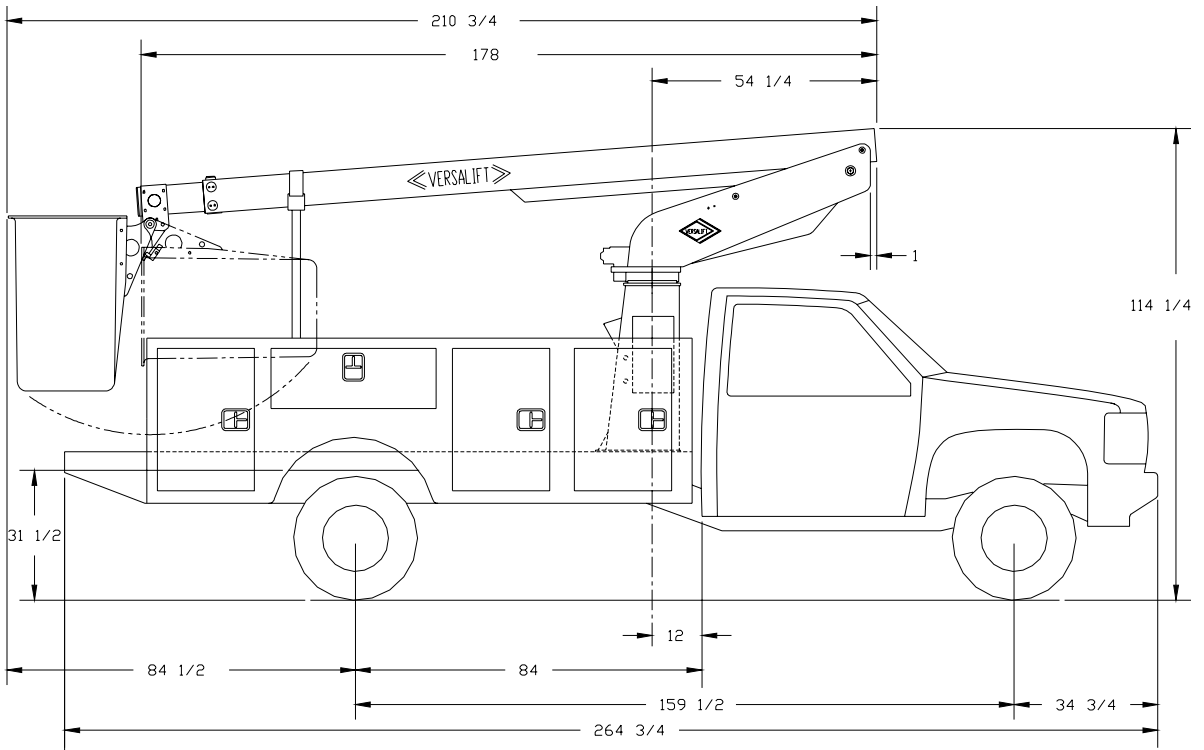
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|----------|---------------|-------------|-----|-------|---------|
| 03279802 | FIRST RELEASE | | JSD | KK | 3/27/98 |



SHOWN ON A 1999 FORD F-450
WITH A FIBRE BODY.

| | | | |
|---|----------|---------|----------|
| TIME MANUFACTURING COMPANY WACO TEXAS | DWN. BY | DATE | TITLE |
| | JSD | 3/27/98 | TEL-29-N |
| | CHKD. BY | DATE | OUTLINE |
| | GFW | 3/30/98 | |
| SIZE | A | SCALE | N/A |
| SHEET | 1 OF 1 | | DWG. NO. |
| | | | 26126-1 |

SPECIFICATIONS

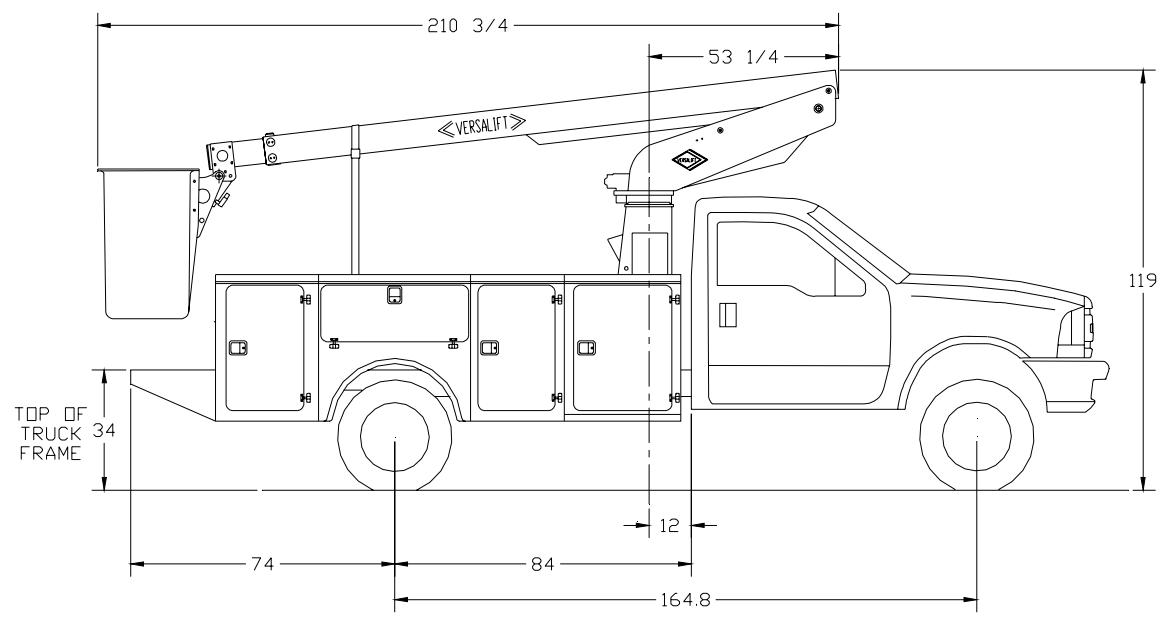


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| TIME MANUFACTURING COMPANY WACO TEXAS | DWN. BY | DATE | TITLE |
| | CKR | 6-22-95 | TEL-29-NE |
| | CHKD. BY | DATE | OUTLINE |
| | APPR. BY | DATE | |
| SCALE | DWG. NO. | REV. | |
| 1=30 | 15388-1 | - | |



SPECIFICATIONS

| REV. | ERCN NO. | DESCRIPTION | BY | APPR. | DATE |
|----------|----------|---------------|-----|-------|---------|
| 03279802 | | FIRST RELEASE | JSD | KK | 3/27/98 |



SHOWN ON A 1999 FORD F-450 WITH A FIBRE BODY.

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|---|-----------------|---------------------|-------------------------------|
| <p>TIME MANUFACTURING COMPANY WACO TEXAS</p> | DWN. BY JSD | DATE 3/27/98 | TITLE TEL-29-NE OUTLINE |
| | CHKD. BY CFW | DATE 3/30/98 | |
| | SIZE A | SCALE N/A | |
| SHEET 1 OF 1 | | DWG. NO. 26127-1 | |

