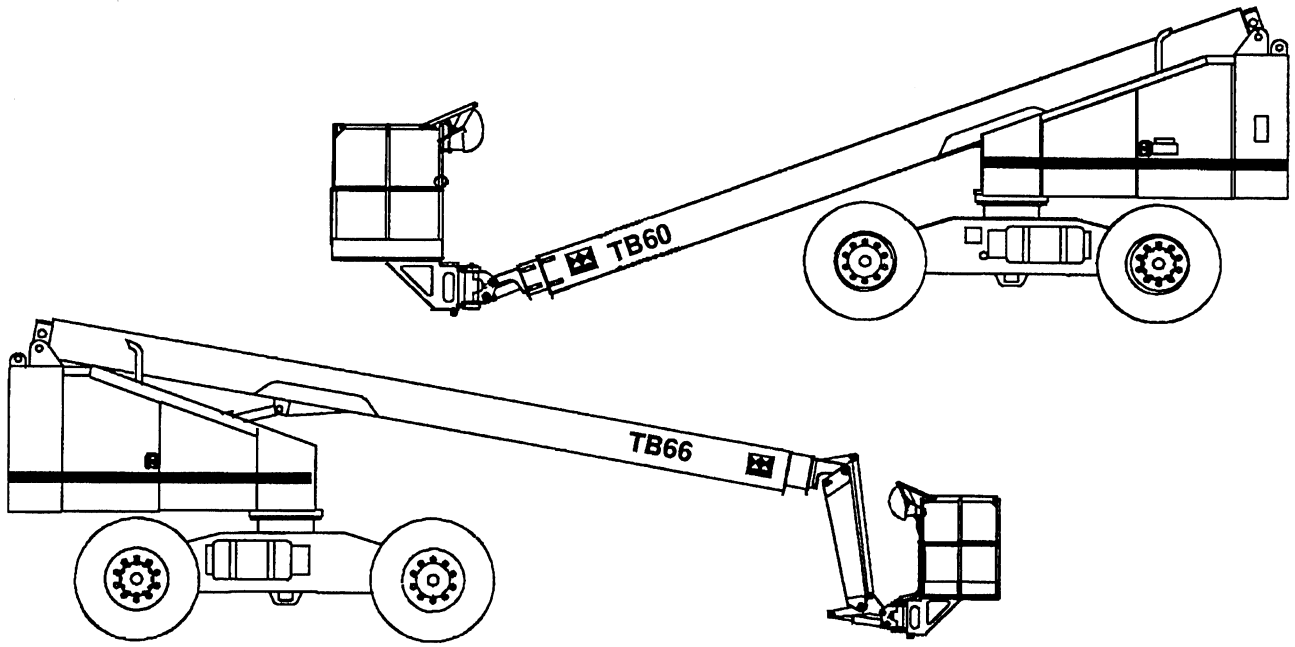
TEREX AERIALS

OPERATOR'S MANUAL
SELF-PROPELLED BOOM LIFT
MODEL TB60/66 S/N 98630043 and up



FOR PARTS OR SERVICE
CONTACT:

OPERATION AND OPERATOR MAINTENANCE MANUAL

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Revision: July '98
P/N 17149-1

Table of Contents

⚠WARNING

THE OPERATOR MUST READ AND UNDERSTAND ALL OF THE INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THE AERIAL LIFT.

Introduction

Owners, Users and Operators:

Terex Aerials appreciates your choice of our aerial lift for your application. Our number one priority is user safety, which is best achieved by our joint efforts. We feel that you can make a major contribution to safety if you as the equipment user and operator:

1. **Comply** with OSHA, Federal, State and Local Regulations.

2. **Read, understand and follow** the instructions in this and other manuals supplied with this machine.

3. Use **good, safe work practices** in a common sense way.

4. Have only **trained operators** - directed by **informed and knowledgeable supervision** - running the machine.

If there is anything in this manual that is not clear or which you believe should be added, please send your comments to the Technical Publications Department, Terex Aerials, 10600 West Brown Deer Rd., Milwaukee, WI, 53224 or call (414) 355-0802.

To help you recognize important safety information, we have identified warnings and instructions that directly impact on safety with following signals:

⚠ DANGER

⚠ WARNING

⚠ CAUTION

THESE SYMBOLS MEAN YOUR SAFETY IS INVOLVED! SEE NEXT PAGE FOR SPECIFIC INFORMATION. READ, UNDERSTAND AND FOLLOW ALL DANGER, WARNING AND CAUTION DECALS ON YOUR MACHINE.

Introduction

⚠ DANGER

"DANGER" INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY. THIS SIGNAL WORD IS LIMITED TO THE MOST EXTREME SITUATIONS.

⚠WARNING

"WARNING" INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

⚠ CAUTION

"Caution" indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It is also used to alert against unsafe practices, and for property-damage-only situations.

One final note: The best method to protect yourself and others from injury or death is to use common sense. If you are unsure of any operation, don't start until you are satisfied that it is safe to proceed and have discussed the situation with your supervisor.

Thank you!

Safety

Section 2

Safety

⚠WARNING

IN ADDITION TO THE SPECIFIC MAINTENANCE AND OPERATING INSTRUCTIONS IN THIS MANUAL, THE OPERATOR MUST READ AND UNDERSTAND ALL INSTRUCTIONS IN THE INTRODUCTION, AND IN THE FOLLOWING SAFETY RULES SECTION.

⚠ Training and Knowledge

1. **Do not operate** this aerial lift until you have been trained in its operation. This equipment may only be operated by trained personnel, who have demonstrated their ability to do so safely.

2. **Do not operate** this aerial lift until you have read and understood the Operator's Manual, EMI Safety Manual, and Manual of Responsibilities supplied with the aerial lift.

3. **Know** OSHA, Federal, State and local regulations applicable to your job.

4. **Read and understand** all decals and warnings on your aerial lift.

⚠ To Prevent Tip-over

1. **Do not** exceed the load capacity of the aerial lift. The load capacity includes the combined weight of personnel, tools, fixtures, accessories, etc. Loads should be evenly distributed over the platform floor.

2. **Do not** exceed the maximum number of personnel allowed on the platform. This information is shown on a platform decal, and can be found in the "Specifications" Section of this manual.

3. **Check the load capacity** of floors, ramps and bridges **before** driving or operating the aerial lift on them.

4. **Do not** alter, disconnect or override any interlocks or other safety devices.

Safety

⚠ To Prevent Tip-over (Continued)

5. **Do not** operate this aerial lift in winds of excess of 25 M.P.H. This aerial lift is rated for use in winds not to exceed 25 M.P.H.

6. **Check clearances** overhead, around and below the aerial lift **before:** moving the boom up, down, in or out; tilting or rotating the platform; rotating the superstructure (turret), or traveling to prevent contact with obstacles.

7. **Do not** travel on slopes (grades) and ramps without first reading "Traveling on Grades and Ramps", later in this manual. This aerial lift is limited in the grades it can safely travel.

8. Before and during traveling:

   A. **Look** in the direction of travel.

   B. **Avoid** obstacles, bumps and potholes.

   C. **Maintain** safe distance from all overhead objects.

   D. **Use** a lookout if necessary!

9. **Do not** raise the platform while positioned on trucks, trailers, railway cars, floating vessels, scaffolds, forklift trucks or similar equipment.

10. **Do not** operate this aerial lift with wheels "cribbed" or positioned on blocks.

11. **With the platform swung away from the stowed position**, use caution when selecting travel or steering direction. Travel and steer direction will be opposite switch or lever movement. Refer to the directional arrow decals on the undercarriage of the machine for travel orientation.

12. **Care should be taken** to keep electric cords, hoses, cables, ropes, etc. from becoming entangled in the aerial lift.

Safety

⚠ To Prevent Tip-over (Continued)

13. **Limit** travel speed to existing conditions. **Do not use high speeds when maneuvering or traveling in reverse. Reverse travel should only be used** to maneuver the aerial lift at job location.

14. **Do not tow this aerial lift unless it is equipped with a towing package!**

15. **Always** operate the controls in a smooth, steady manner.

16. **Do not** use the boom or platform as a crane to lift oversized or hanging loads.

17. **Always** Travel up or down slopes or grades with platform pointed down slope and with boom in stowed position (fully lowered and "in" or retracted).

⚠ Slip and Fall Protection

1. **Each person** in the aerial platform must wear fall protection **at all times**.

2. **Do not** attach fall protection devices to an adjacent structure while on the platform.

3. **Do not** use planks, ladders, scaffolding or any other device on the platform to extend your reach.

4. **Always** keep both feet on the platform floor while traveling and working with the aerial lift. **Do not** lean over or stand on platform guard railings.

5. **Keep** platform, steps and shoes free from oil, mud, grease and other slippery substances. In cold weather, clear snow and ice from platform and steps.

6. **Make sure** the platform guard rails are not damaged and the entry gate is closed after entering the platform.

7. **Do not** attempt to climb down the boom assembly if the machine fails while the operator's platform is raised.

Safety

⚠ Slip and Fall Protection (Continued)

8. **Do not** operate this machine while under the influence of any drugs or alcohol.

9. **Do not** work on the platform if you are bothered by heights, seizures or dizzy spells.

10. Actuation of the red "Emergency Stop" switch will apply brakes immediately, **causing the platform to jerk** as the machine comes to a sudden stop. Brace yourself.

⚠ General Information

1. **Do not** operate the aerial lift until it has been properly inspected, maintained and serviced. **Any problems or malfunctions** should be reported immediately to your supervisor, and operations stopped until corrected.

2. See the **"Before Operation" section** in this manual for decal listing, and replace those that are missing or illegible.

3. **Always** wear approved headgear, eye protection, foot protection and fall-protection.

4. **Secure** all tools and other materials in the platform to prevent them from accidentally falling or being knocked from the platform.

5. **When other vehicles or moving equipment are present**, comply with all local ordinances, safety rules and warning rules for the workplace.

6. **Do not** allow ground personnel around or under the raised platform.

7. **Do not** allow ground personnel to tamper with, service or operate the machine using the ground controls while anyone is in the platform, except in an emergency.

8. **Do not** use the aerial lift for horseplay, stunt driving or recreational use. **Report** any misuse of equipment to the appropriate personnel.

9. **Do not** use the aerial lift outdoors in electrical storms.

10. **Do not** block the foot switch or any function control in the operating position.

Safety

⚠ General Information (Continued)

11. **Do not** attempt to open any hydraulic line or component without first relieving all system pressures and shutting off fluid flow from the tank.

12. **Always** attach the aerial lift to a winch when loading to or unloading from a transporting vehicle.

13. Whenever **disengaging the drive torque hubs** or before **disconnecting from towing vehicle**, ensure that the machine cannot roll.

14. When **transporting the machine**, do not tie the platform or boom to the transporting vehicle in any way.

15. **Do not** raise, lower, extend, retract, tilt or rotate the platform into stationary objects, as this will cause damage to mechanical and hydraulic components.

16. **Do not** use platform or boom functions to push or tow the aerial lift or another vehicle.

17. **Avoid** sudden braking or steering, go slowly and leave more maneuvering room during cold weather operation until the aerial lift has warmed up.

18. **Immediately report** any erratic noises, vibrations or malfunctions of the machine to appropriate personnel. Machine shall be removed from service until diagnosis and any necessary repairs have been completed.

19. **When leaving the aerial lift**, lower platform to "full down and in" position and remove key from ground control to prevent unauthorized use.

20. **Refuel aerial lift in a well ventilated area** free of any hazards which may cause fuel fumes to ignite.

21. **Check fuel system** for leaks or damaged fuel lines before operating the machine. If any damage is found, contact your supervisor immediately. Machine shall be removed from service until diagnosis and any necessary repairs have been completed.

Safety

⚠ General Information (Continued)

22. It is not possible for us to foresee every situation that could arise during operation of this aerial lift. Even if we do not state specifically that a particular action **should not be taken**, that does not mean that it is safe to do so. Personal injury or damage to equipment may result. Use common sense! If in doubt, contact Terex Customer Service.

23. Battery Care and Use:

    A. **Do not** "jump start" any other vehicle with your aerial lift's batteries.

    B. Batteries must be **charged in a well-ventilated area** free of flames, sparks or other such hazards. The vapors **can explode** if exposed to flames or sparks.

⚠WARNING

BATTERY ACID CAN CAUSE SERIOUS BURNS.
IF ACID COMES IN CONTACT WITH SKIN OR EYES,

IMMEDIATELY FLUSH WITH WATER. SEEK MEDICAL ATTENTION.

    C. **Do not** use the aerial lift as a welding ground.

    D. **Disconnect battery leads** before performing any welding operations on the aerial lift.

Safety

⚠ Operation in the Vicinity of Electrical Conductors

1. If the platform, supporting structure or any other conductive part of the aerial lift contacts a non-insulated electrical conductor, the result may be **SERIOUS INJURY OR DEATH** for persons on or near the aerial lift.

2. You, the owner of the electrical conductor and the electric utility must jointly determine the specific procedure to complete the job safely.

3. Always verify that the electric utility has been consulted before beginning work.

4. Except where electrical distribution and transmission lines have been de-energized and visible ground or effective barriers have been erected to prevent physical and arcing contact with the conductors, the following provisions shall be met:

   A. Over lines, the operation of the aerial lift over electrical conductors is prohibited.

   B. No part of the aerial lift, tools, equipment or personnel, during operation, shall come closer than the distance shown in the table below.

Voltage Range (Phase to Phase)	Minimum Safe Clearance	
	Feet	Meters
0 to 300 Volts	AVOID CONTACT	
Over 300 V TO 50 kV	10	3.05
Over 50 kV TO 200 kV	15	4.60
Over 200 kV TO 350 kV	20	6.10
Over 350 kV TO 500 kV	25	7.62
Over 500 kV TO 750 kV	35	10.67
Over 750 kV TO 1000 kV	45	13.72
One foot (30.5 cm) additional clearance is required for every additional 30,000 volts.		

Safety

⚠ Operation in the Vicinity of Electrical Conductors (Continued)

5. You must allow for platform sway, rock or sag, and electrical line movement.

6. This aerial lift is not insulated, and does not provide protection from contact with or proximity to electrically charged conductor.

If Contact is Made

1. If operating from the platform, attempt to move the aerial lift from contact with the electrical conductor.

2. If the aerial lift cannot be removed from contact, the following precautions should be taken to avoid possible **ELECTROCUTION** to yourself and ground personnel:

   A. **Do not** attempt to operate the aerial lift from the ground control.

   B. If you can leave the aerial lift you must jump off the aerial lift and hop away, keeping your feet together as ground will be energized. Normal walking or running will result in possible **ELECTROCUTION, INJURY OR DEATH.**

   C. Warn personnel to **stay well away** from the aerial lift as contact with it or the ground in the vicinity will result in possible **ELECTROCUTION, INJURY OR DEATH.**

   D. While on the aerial lift, do not contact poles or other structures. Such contact will provide a path to ground, leading to possible **ELECTROCUTION, INJURY OR DEATH.**

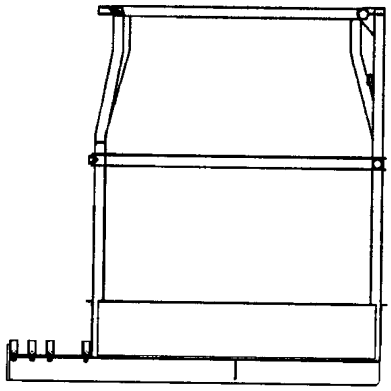
⚠ CAUTION

You must read the complete manual before proceeding with the operation or unloading of the aerial lift.

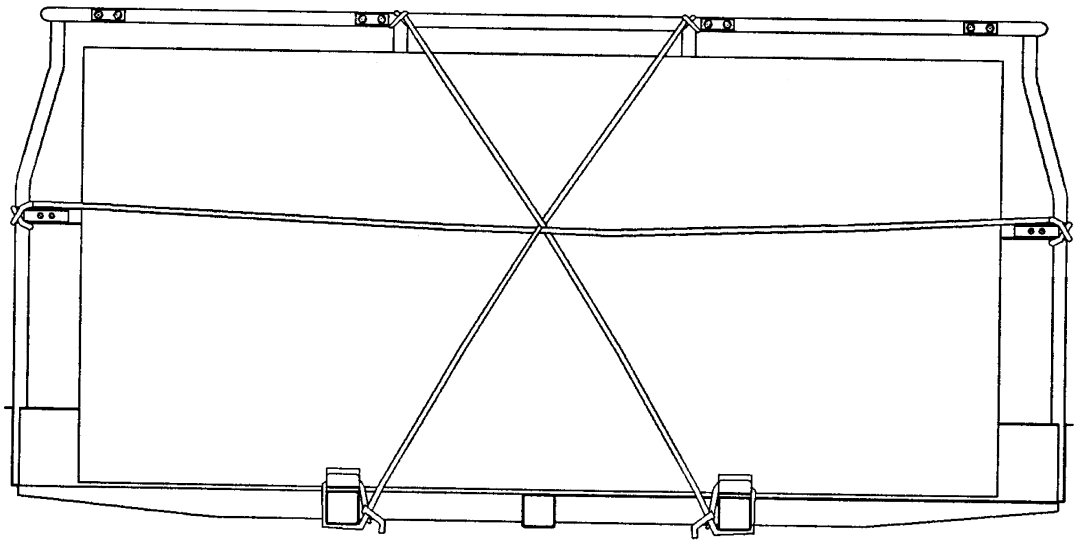
Safety

GLASS HANDLER OPTION

1. Use only factory approved glass handler option.



2. **DO NOT** switch baskets with other aerials not designed to handle glass.
3. This aerial option is rated for glass pieces with 32 square feet (4' x 8') or less of area.
4. This aerial option is rated for use in 25 MPH winds. **DO NOT** use in winds or gusts exceeding 25 MPH.
5. **DO NOT** step or stand on glass handler rack.
6. Enter and exit basket only through gate.
7. **DO NOT** exceed maximum glass load of 150 lbs.
8. **DO** distribute glass load evenly over rack.
9. Use ropes and cords to retain glass in rack.



Specifications

Section 3

Specifications TB60

Machine Specifications	Model TB60
* Working Height (Maximum)	**66 ft 0 in.** (20.12 m)
Platform Height (Maximum)	**60 ft 0 in.** (18.29 m)
Stowed Height	**8 ft 6 in.** (2.59 m)
Stowed Length	**26 ft 1.25 in.** (7.96 m)
Machine Width	**7 ft 11 in.** (2.41 m)
Platform Dimensions	**72 in. x 36 in. x 44 in.** (1.8 m x 0.91 m x 1.12 m)
Horizontal Reach	**51 ft 4.625 in.** (15.66 m)
Boom Elevation	**-20° to 75° above horizontal plane**
Platform Capacity (Unrestricted)	**650 lbs.** (295 kg)
Rated Number of Occupants in Platform	**2**
WheelBase	**8 ft 0 in.** (2.44 m)
Wheel Track	**6 ft. 7 in.** (2.01 m)
Tailswing	**42 in.** (1.07 m)
Turret (Superstructure) Rotation	**360°, continuous rotation**
Turning Curb Radius	**16 ft 9 in.** (5.1 m)
Travel Speed-Platform Stowed	**0 to 3.25 mph** (0 to 5.23 kph)

⚠WARNING

***CLEARANCE MUST BE ALLOWED FOR BODY PARTS OF PERSONNEL IN PLATFORM AT THIS AND ALL OTHER WORK HEIGHTS.**

Specifications TB60 (Continued)

Machine Specifications **Model TB60**

Power Source:
- Standard - Ford LRG 423, 66 hp (49.2 Kw), Liquid Cooled, Gasoline (Dual Fuel option)
- Optional - Deutz F4L1011, 56 hp (41.7 Kw), Air Cooled, Diesel
- Optional - Cummins 4B3.9, 76 hp (56.7 Kw), Liquid Cooled, Diesel

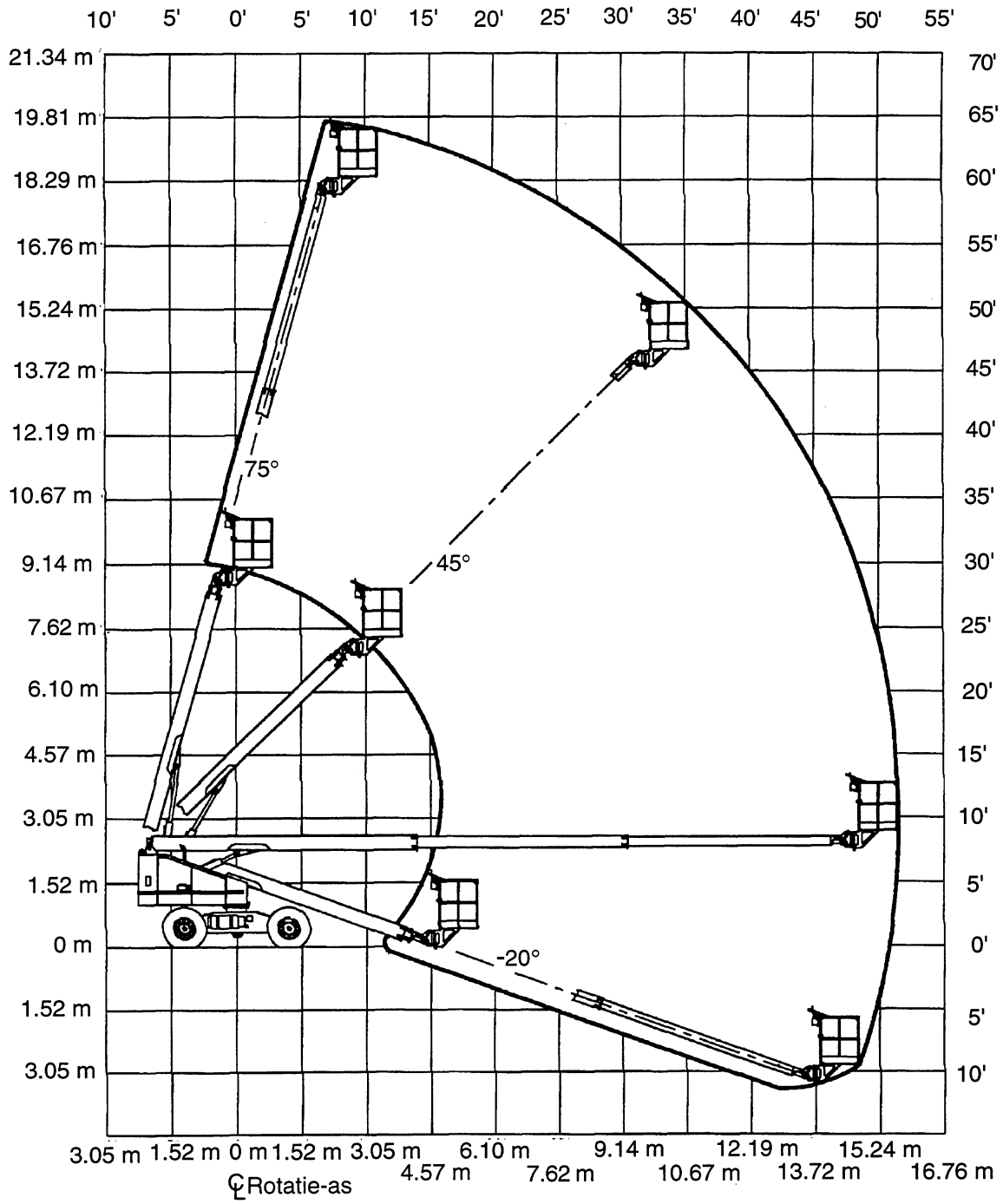
Fuel Tank Capacity ..... **40 gal.** (151 liters)
Hydraulic System (Load sensing and pressure compensating)
- Maximum Operating Pressure ..... **2,500 psi** (172 bar) (176 kg-cm^2)
- Reservoir Capacity ..... **52 gal.** (196 liters)

Tires (monofilled) ..... **15 x 19.5 13 P.R. (loader lug)**
Ground Clearance ..... **10 in.** (0.25 m)
Shipping Weight (Approx.) ..... **21,000 lbs.** (9,526 kg)
Wheel Loading
- Max. concentrated floor loading pressure ..... **64 psi** (4.5 kg-cm^2)
- Wheel Load (maximum) ..... **10,500 lbs.** (4,773 kg)

Wind Speed Rating ..... **25 mph** (40.23 km/h) (6° Beaufort)
Gradeability (on hard surface)
- Two Wheel Drive ..... **30% (16°)**
- Four Wheel Drive ..... **50% (27°)**

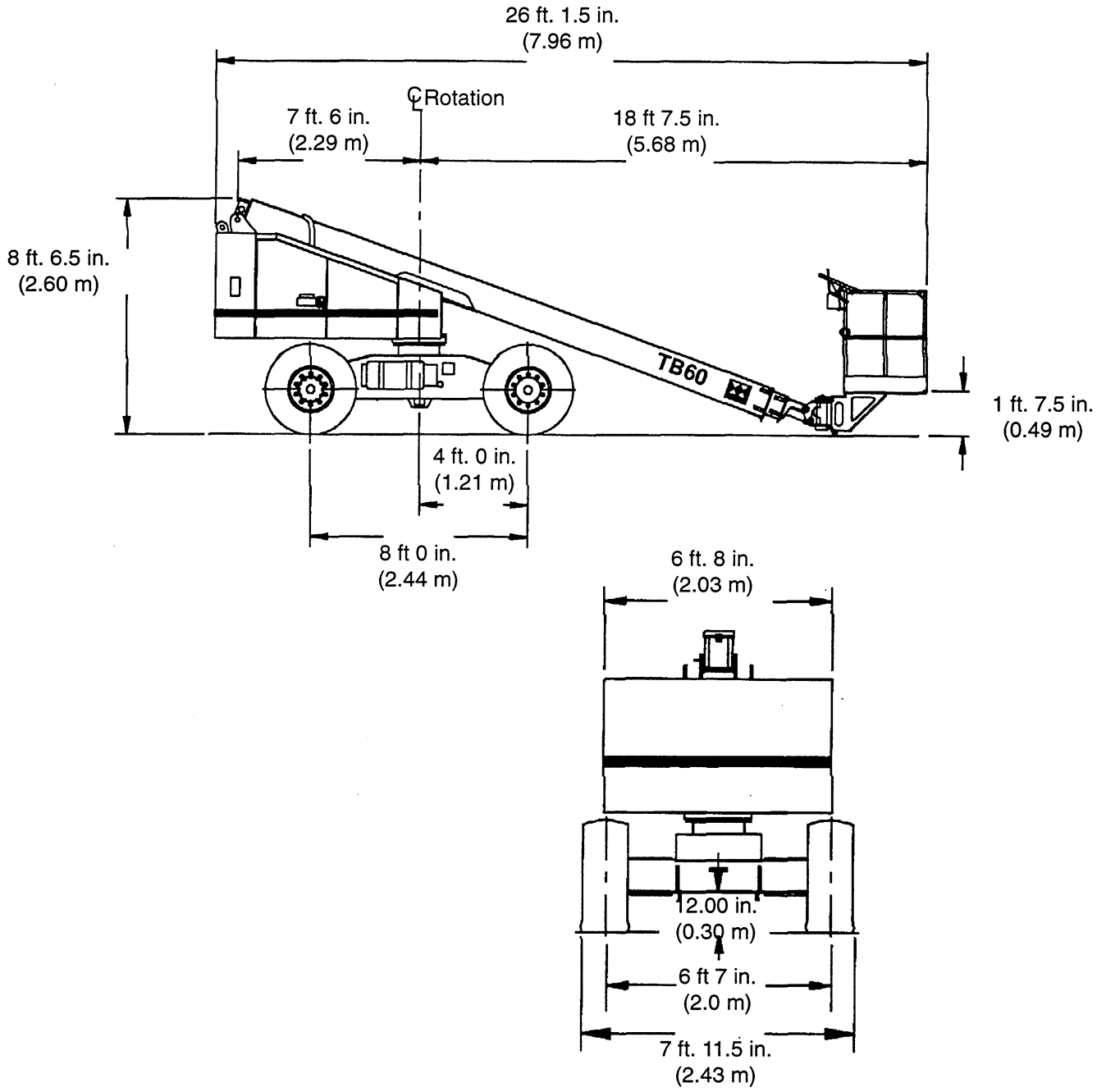
Specifications

Range Diagram, Model TB60 Boom Lift



Specifications

General Dimensions, TB60 Boom Lift



Specifications TB66

Machine Specifications	Model TB66
* Working Height (Maximum)	**72 ft 0 in.** (21.95 m)
Platform Height (Maximum)	**66 ft 0 in.** (20.12 m)
Stowed Height	**8 ft 6 in.** (2.59 m)
Stowed Length	**28 ft 11 in.** (8.81 m)
Machine Width	**7 ft 11 in.** (2.41 m)
Platform Dimensions	**72 in. x 36 in. x 44 in.** (1.8 m x 0.91 m x 1.12 m)
Horizontal Reach	**57 ft 4.625 in.** (17.49 m)
Boom Elevation	**-20° to 75° above horizontal plane**
Platform Capacity (Unrestricted)	**500 lbs.** (227 kg)
Rated Number of Occupants in Platform	**2**
WheelBase	**8 ft 0 in.** (2.44 m)
Wheel Track	**6 ft. 7 in.** (2.01 m)
Tailswing	**42 in.** (1.07 m)
Turret (Superstructure) Rotation	**360°, continuous rotation**
Turning Curb Radius	**16 ft 9 in.** (5.1 m)
Travel Speed-Platform Stowed	**0 to 3.25 mph** (0 to 5.23 kph)

⚠WARNING

***CLEARANCE MUST BE ALLOWED FOR BODY PARTS OF PERSONNEL IN PLATFORM AT THIS AND ALL OTHER WORK HEIGHTS.**

Specifications TB66 (Continued)

Machine Specifications **Model TB66**

Power Source:
- Standard - Ford LRG 423, 66 hp (49.2 Kw), Liquid Cooled, Gasoline (Dual Fuel option)
- Optional - Deutz F4L1011, 56 hp (41.7 Kw), Air Cooled, Diesel
- Optional - Cummins 4B3.9, 76 hp (56.7 Kw), Liquid Cooled, Diesel

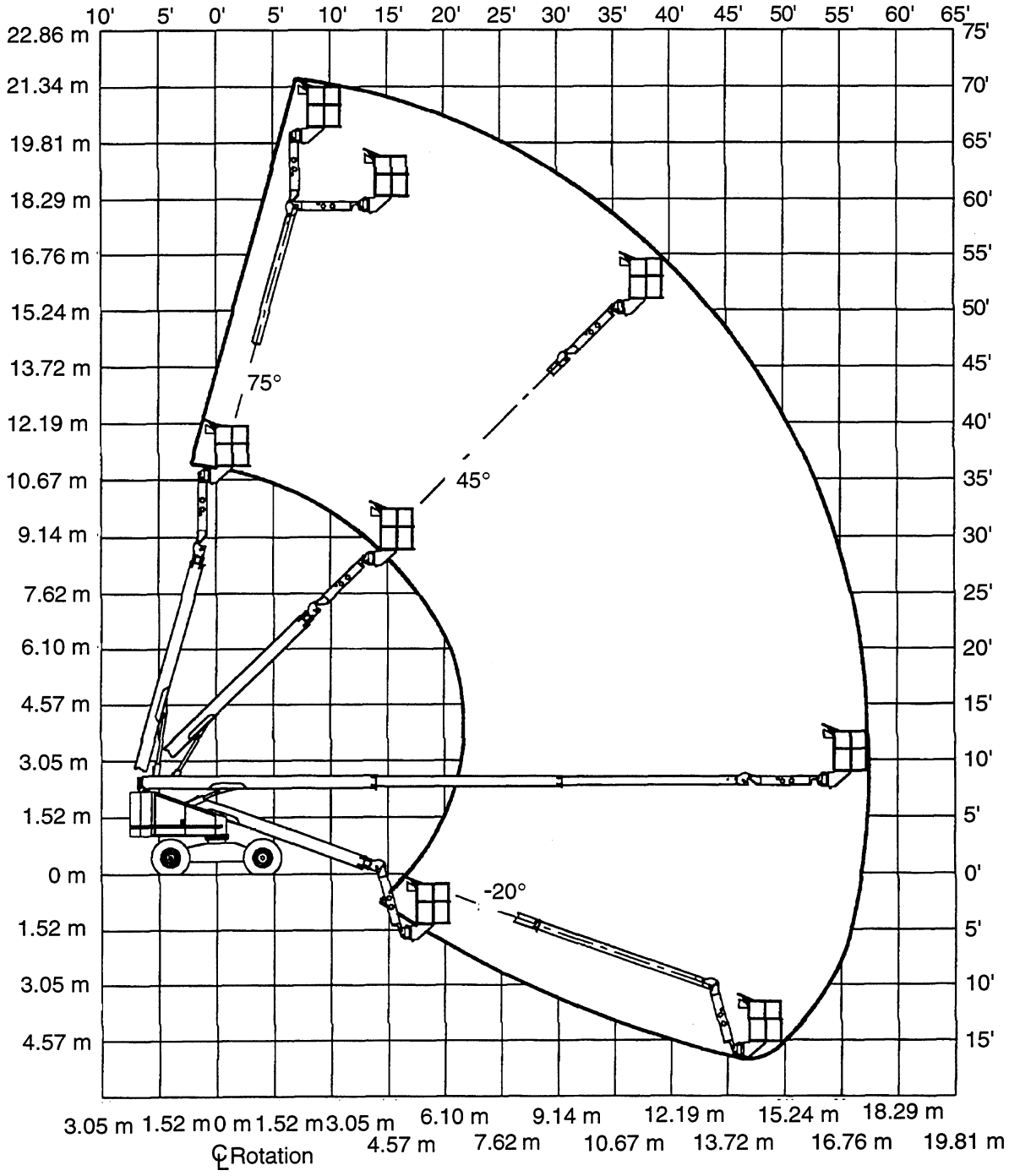
Fuel Tank Capacity ..... **40 gal.** (151 liters)
Hydraulic System (Load sensing and pressure compensating)
- Maximum Operating Pressure..... **2,500 psi** (172 bar) (176 kg-cm^2)
- Reservoir Capacity ..... **52 gal.** (196 liters)

Tires (monofilled) ..... **15 x 19.5 13 P.R. (loader lug)**
Ground Clearance..... **10 in.** (0.25 m)
Shipping Weight (Approx.) ..... **25,000 lbs.** (11,340 kg)
Wheel Loading
- Max. concentrated floor loading pressure ..... **86.5 psi** (6.1 kg-cm^2)
- Wheel Load (maximum) ..... **15,730 lbs.** (7,135 kg)

Wind Speed Rating ..... **25 mph** (40.23 km/h) (6° Beaufort)
Gradeability (on hard surface)
- Two Wheel Drive ..... **25% (14°)**
- Four Wheel Drive ..... **50% (27°)**

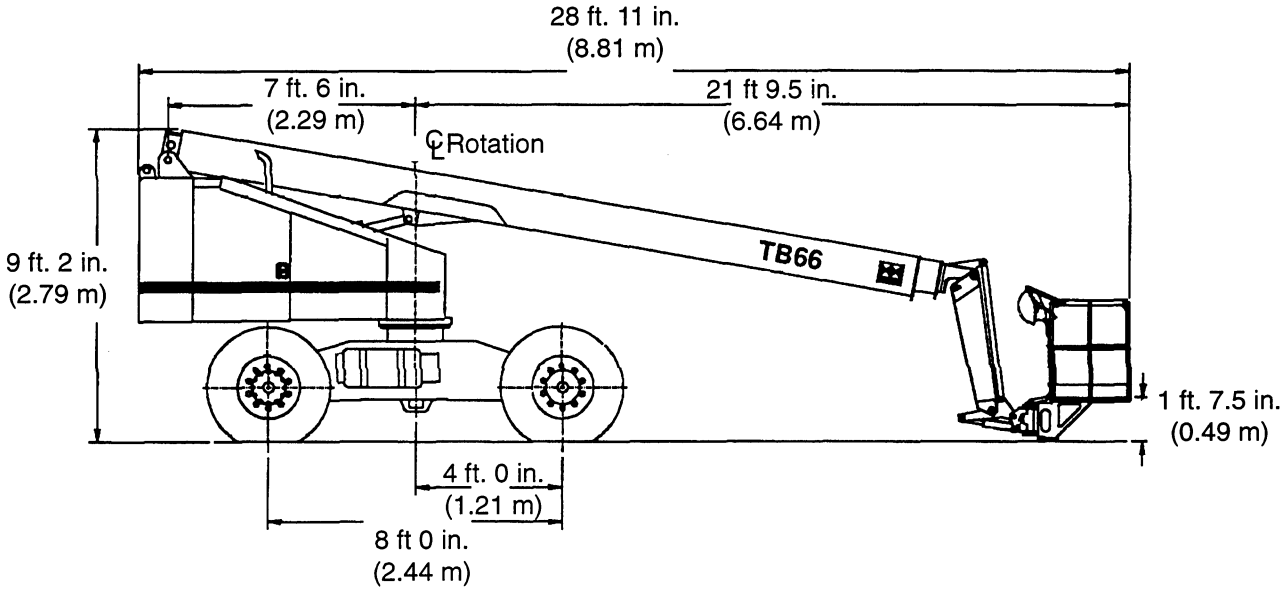
Specifications

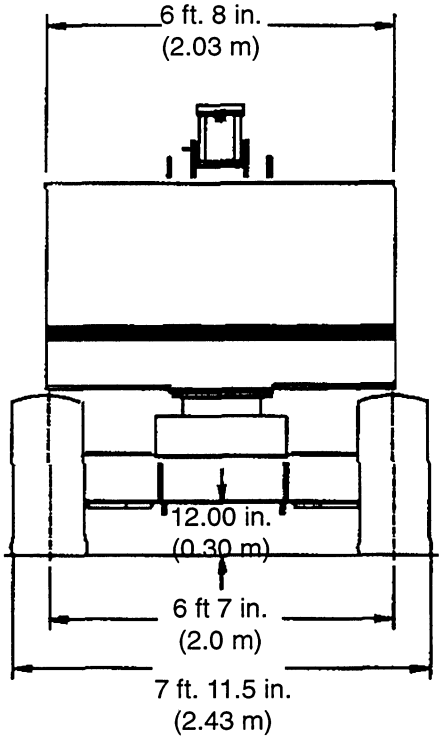
Range Diagram, Model TB66 Boom Lift



Specifications

General Dimensions, TB66 Boom Lift





Controls and Instruments

Section 4

Controls and Instruments

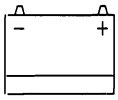
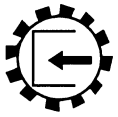
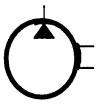
This section is intended to familiarize the operator with the controls and instruments provided for the operation of this machine.

It should be emphasized, however, that merely knowing the controls is inadequate preparation for operating boom lift aerial platforms.

Do not attempt to operate the machine until all sections of this manual have been read and understood.

Controls and Instruments

Universal Symbol Identification

 SAFETY	 ENGINE R.P.M.	 BATTERY
 EMERGENCY STOP	 HORN	 DRIVE
 GLOW PLUG	 EMERGENCY PUMP	 CIRCUIT BREAKER
 CHOKE	 WORK LIGHTS	 GENERATOR
 IGNITION	 OVERHEAT	 GAS
 FAST or HI	 LOW OIL PRESSURE	 PROPANE
 SLOW or LOW	 ENGINE START	 HOURMETER
 ELECTRICAL SYSTEM OFF	 ENGINE NOT RUNNING	 ON OFF

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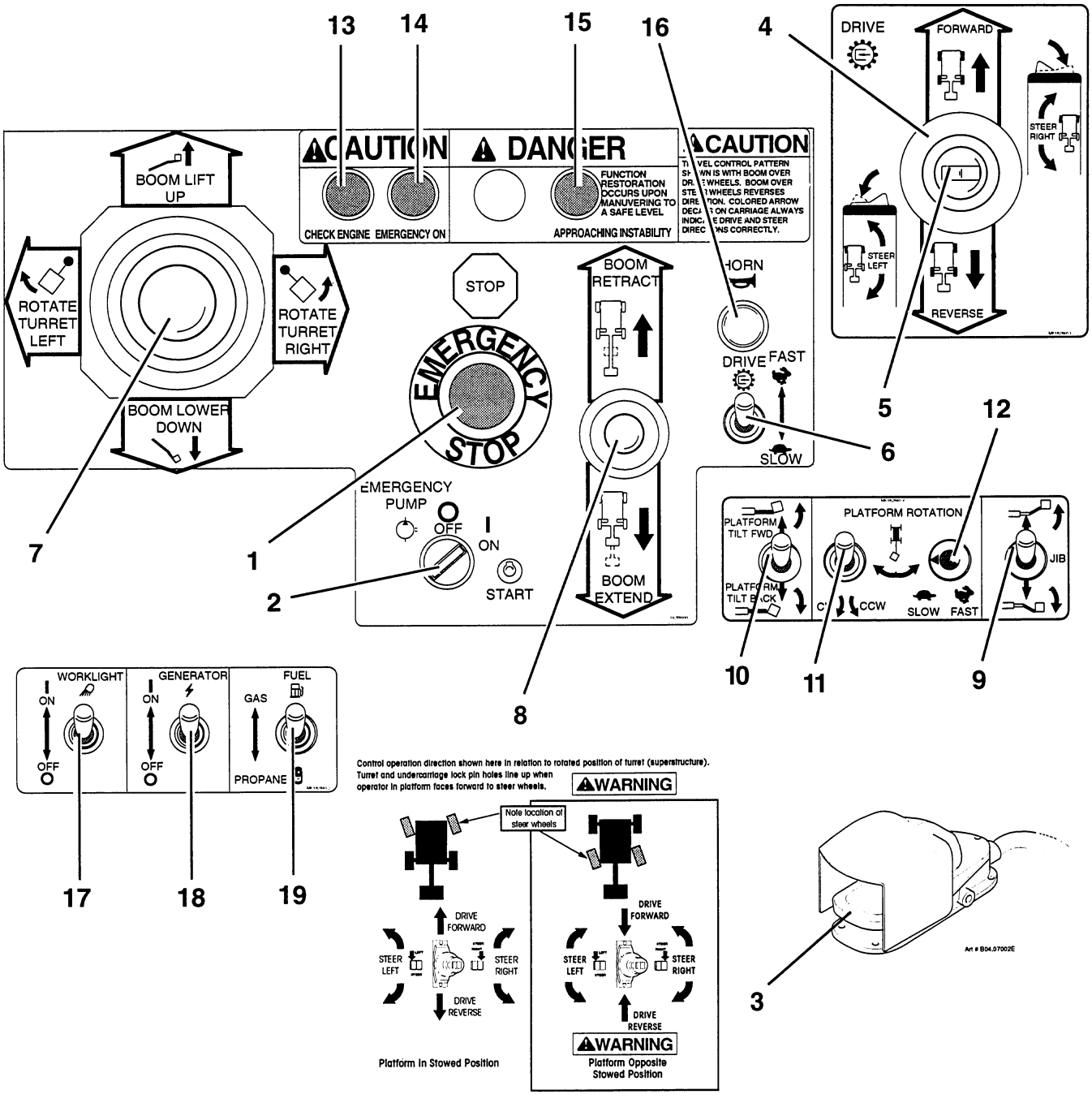
Controls and Instruments

Aerial Control Station



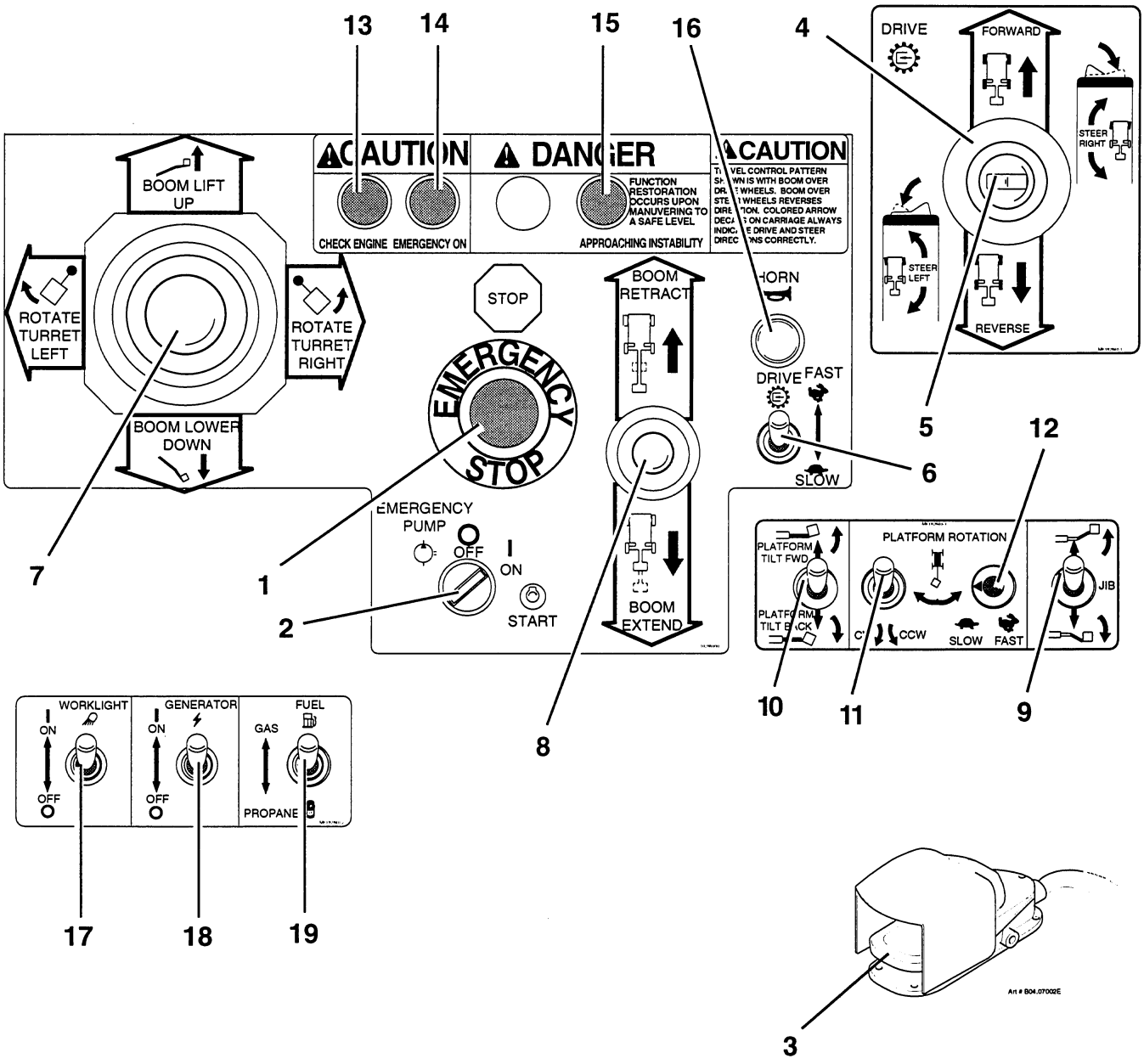
Controls and Instruments

Aerial Control Station Controls Identification

Key No.	Control Description
1.	Emergency Stop Switch
2.	Emergency Pump, Off/ On and Start Switch
3.	Foot Operated Switch
4.	Drive Control Lever
5.	Steer Switch
6.	Drive Speed
7.	Main Boom Lift and Rotate Turret Lever
8.	Boom Retract/ Extend Lever
9.	Jib Up/ Down Toggle Switch
10.	Platform Tilt Toggle Switch
11.	Platform Rotate Toggle Switch
12.	Platform Rotate Speed Control
13.	Check Engine (Engine Distress) Light
14.	Emergency On Light
15.	Approaching Instability Light
16.	Horn Button
17.	Light Toggle Switch (Option)
18.	Generator Toggle Switch (Option)
19.	Fuel, Gas/ Propane Toggle Switch

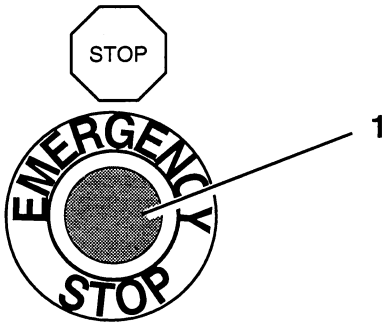
Controls and Instruments

Aerial Control Station



Controls and Instruments

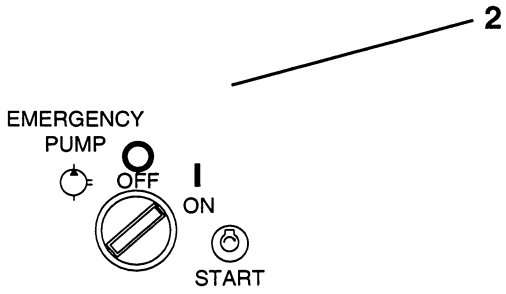
Aerial Control Station Controls Description



1. **Emergency Stop Switch.** Push "in" to stop all functions in an emergency.

   Pull out or rotate clockwise (depending on style used) to release switch and restore all functions.

   The Emergency Stop switches at <u>both</u> the Aerial and Ground Control stations must be released to allow any functions to operate.



2. **Emergency Pump/Off/ On and Start Switch.** Turn switch all the way to the right to "START" to start engine. Release key switch when engine starts, switch will return to "ON".

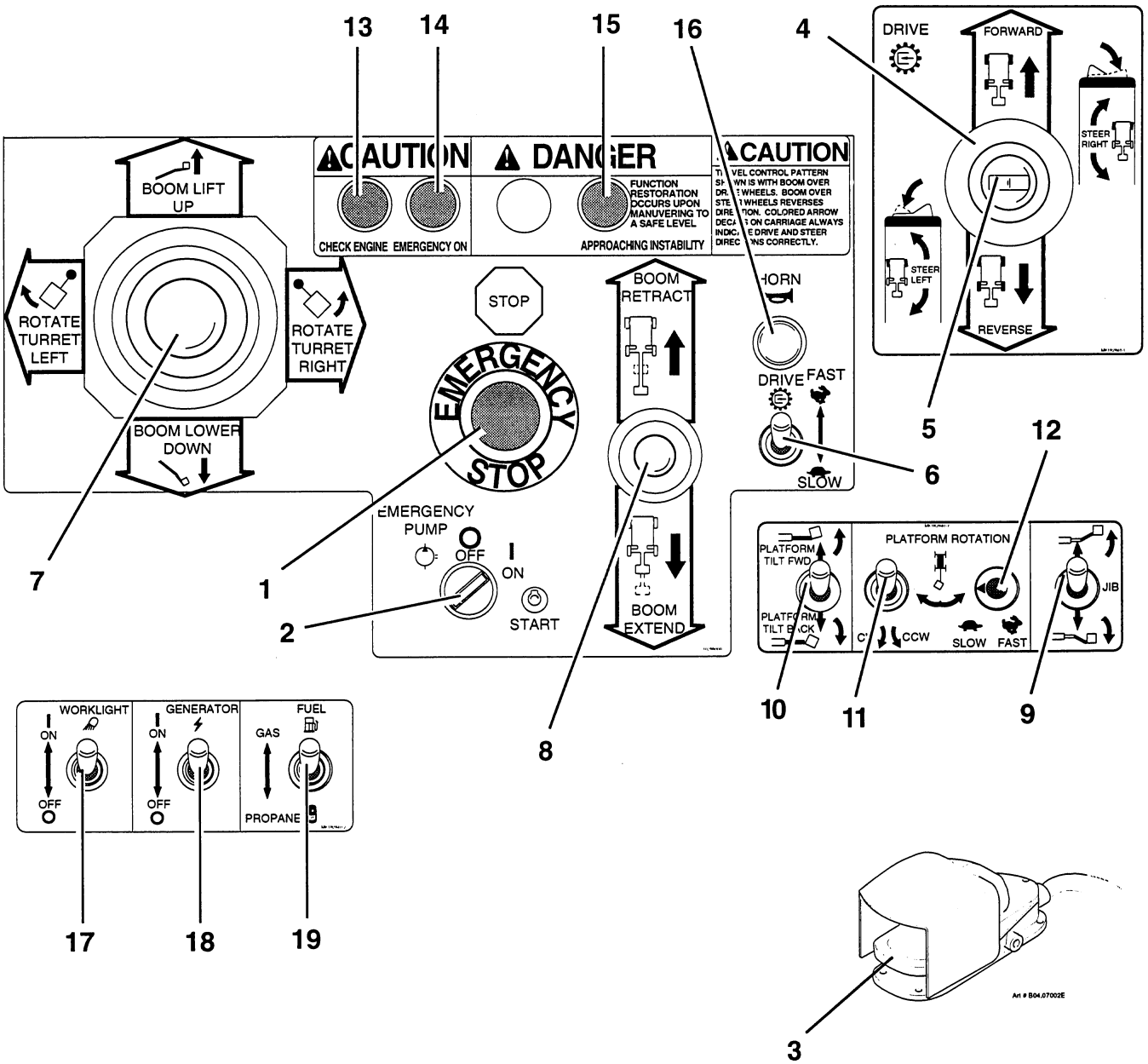
   Turn key switch up to "OFF" to stop engine.

   Turn and hold switch to the left to "EMERGENCY PUMP" to operate the emergency pump. With the key switch turned to "EMERGENCY PUMP", operate any pump function.

   To prevent emergency pump battery from completely discharging and the emergency pump from overheating, release the switch to allow a 30 second rest period after every 30 seconds of operation.

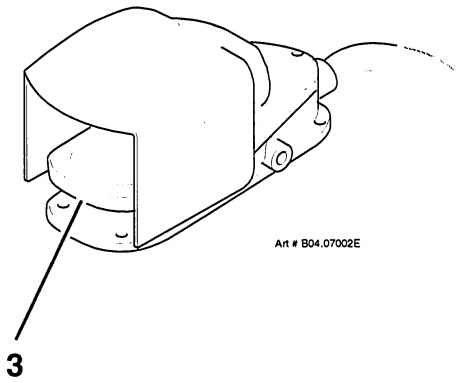
Controls and Instruments

Aerial Control Station



Controls and Instruments

Aerial Control Station Controls Description (Continued)



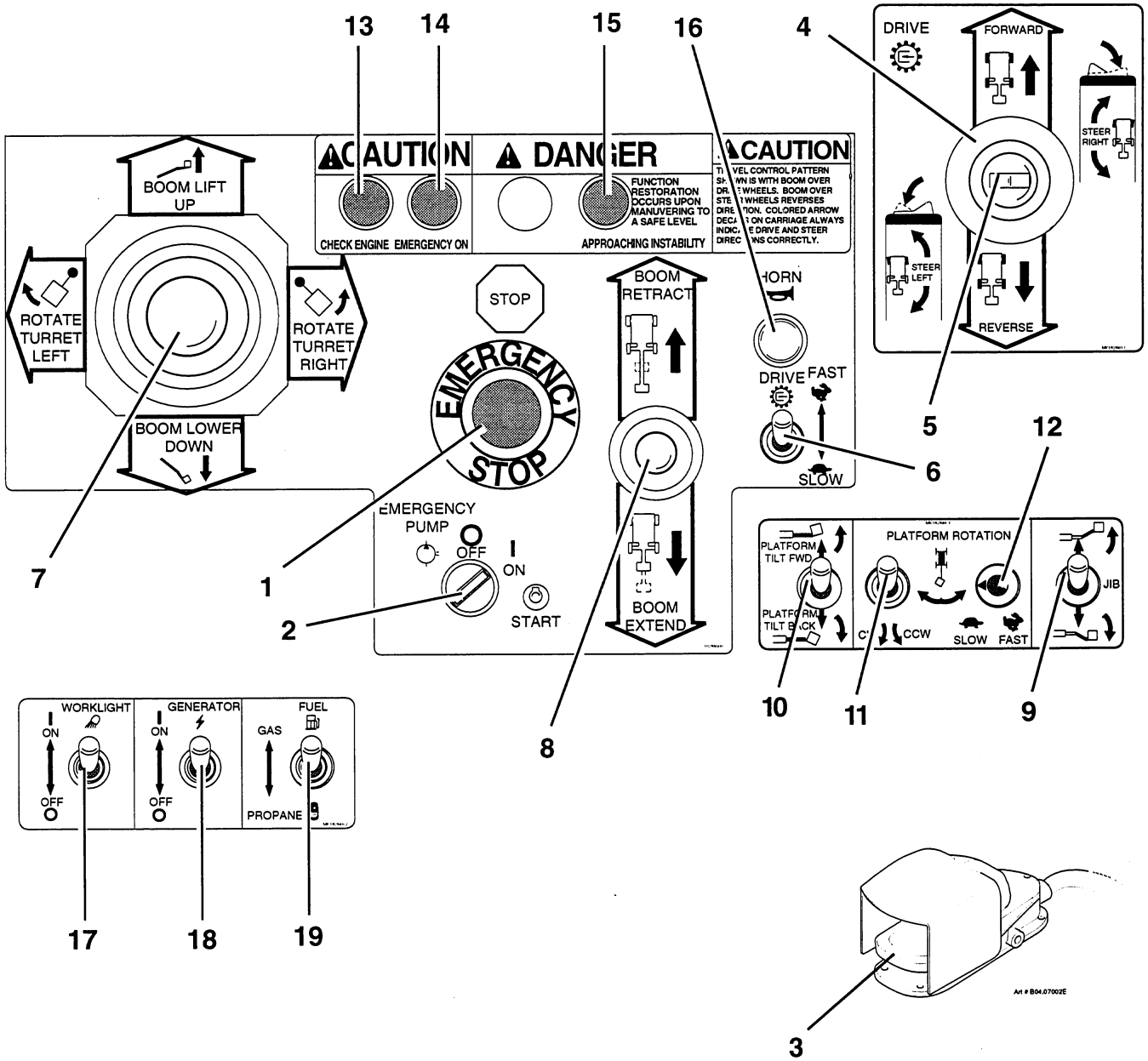
3. **Foot Operated Switch.** Mounted on platform floor. Step down on pedal to activate the main hydraulic pump, allowing operation of any hydraulic function (drive, steer, boom or platform movement) from the platform.

   Release pedal to deactivate the main hydraulic pump thus stopping all hydraulic functions.

   Do not operate this switch other than by stepping down on the pedal with your foot.

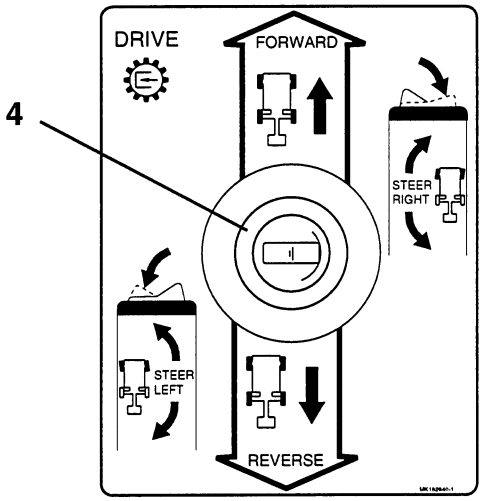
Controls and Instruments

Aerial Control Station



Controls and Instruments

Aerial Control Station Controls Description (Continued)



4. **Drive Control Lever.** Push lever forward to drive aerial lift forward. Pull lever back to drive aerial lift in reverse.

Vary the drive speed from zero to maximum by gradually moving the handle away from the center "off" position.

High speed travel is available only while boom is below horizontal and extended less than 3 feet (0.9 meters)

Release lever to stop movement. Lever is spring centered to the "off" position.

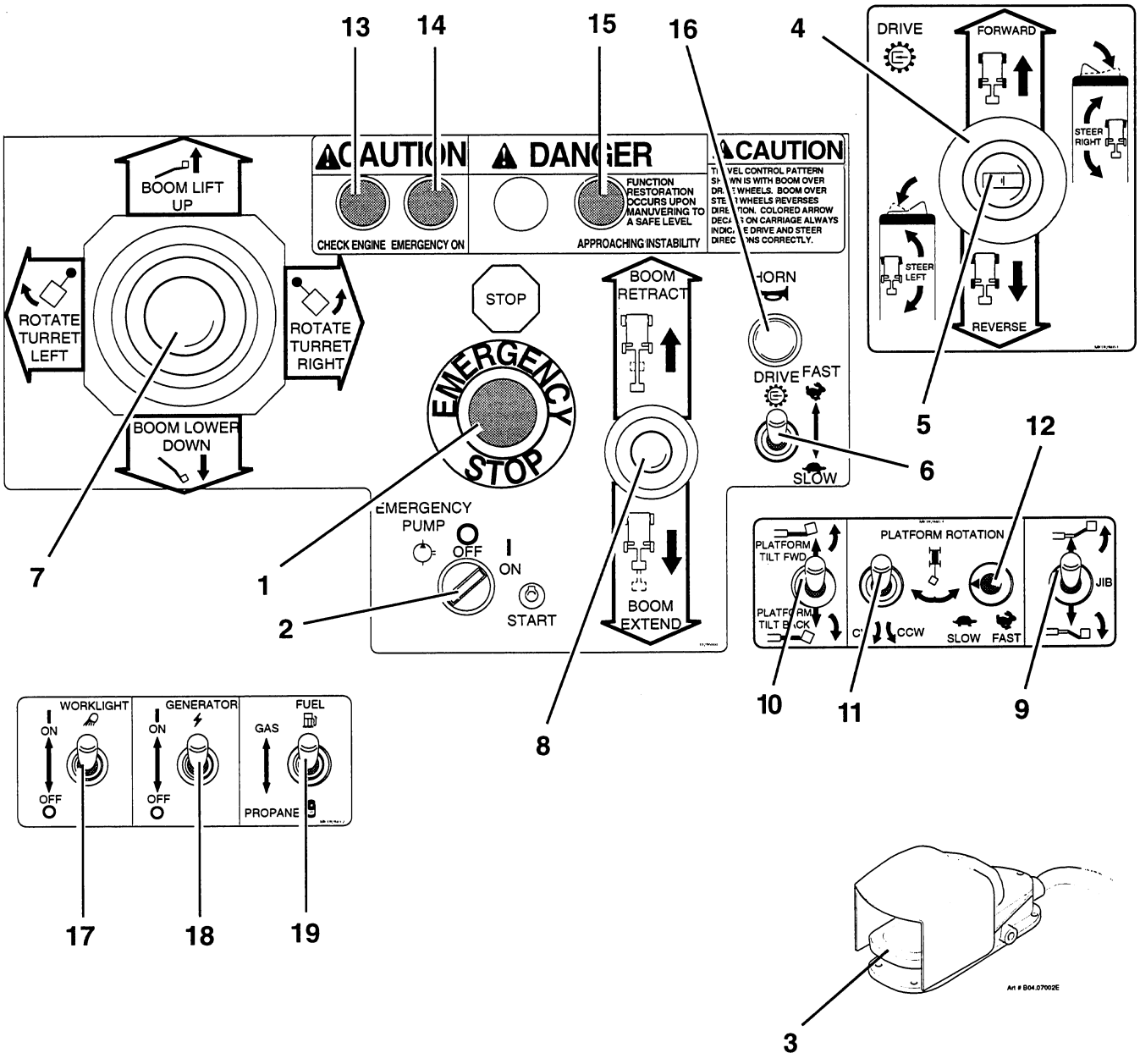
⚠WARNING

WITH THE PLATFORM SWUNG OVER THE STEERING WHEELS, USE CAUTION WHEN SELECTING THE TRAVEL DIRECTION.

TRAVEL DIRECTION WILL BE OPPOSITE TO DRIVE CONTROL LEVER MOVEMENT.

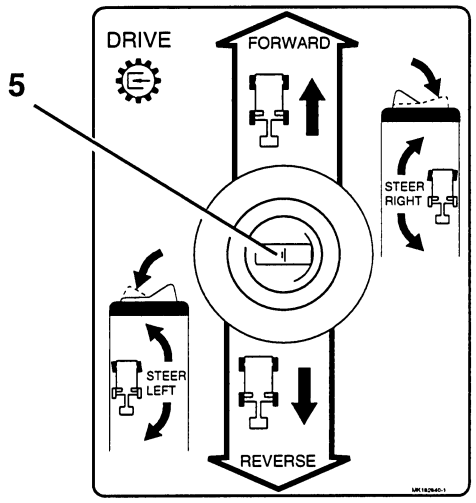
Controls and Instruments

Aerial Control Station



Controls and Instruments

Aerial Control Station Controls Description (Continued)



5. **Steer Switch.** On End of Drive Control Lever. Press and hold down the left side of the switch to turn steer wheels to the left, and the right side to turn right.

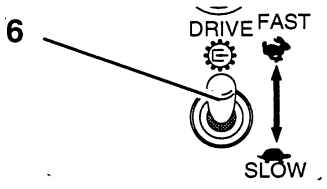
   Release switch to hold steer angle. Switch will return to the "off" position.

   Steering is not self-centering. Press and hold the switch in the opposite direction to straighten wheels.

⚠WARNING

WITH THE PLATFORM SWUNG OVER THE STEERING WHEELS, USE CAUTION WHEN SELECTING THE STEER DIRECTION.

STEER DIRECTION WILL BE OPPOSITE TO STEER SWITCH SELECTION.

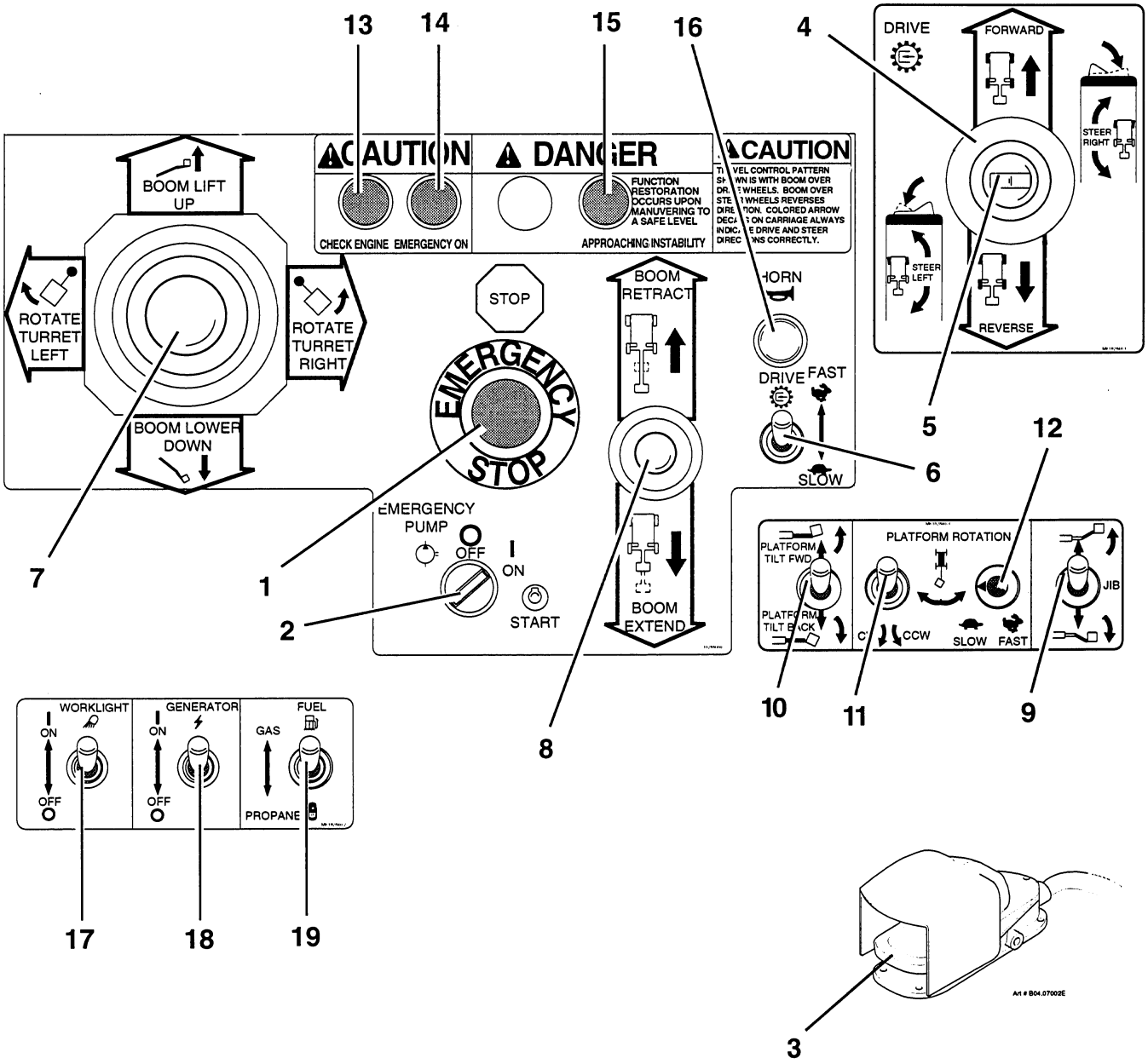


6. **Drive Speed.** Move toggle switch up for "FAST" drive speed.

   Move toggle switch down for "SLOW" drive speed.

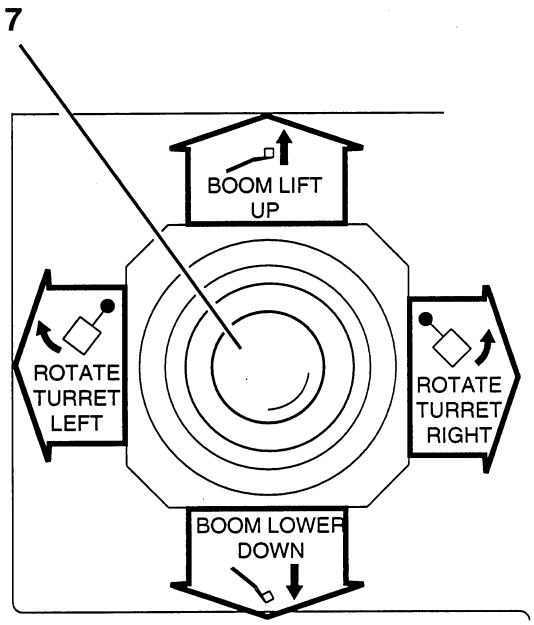
Controls and Instruments

Aerial Control Station



Controls and Instruments

Aerial Control Station Controls Description (Continued)



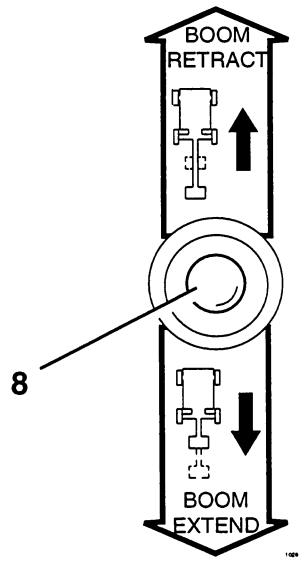
7. **Main Boom Lift and Rotate Turret Lever.** Push lever forward to "BOOM UP" to lift the upper boom section.

   Pull lever back to "BOOM DOWN" to lower boom section.

   Move lever to the left to "SWING LEFT" to rotate the superstructure (turret) counterclockwise.

   Move lever to the right to "SWING RIGHT" to rotate the superstructure (turret) clockwise.

   Release lever to stop movement. The lever is spring centered to the "off" position.



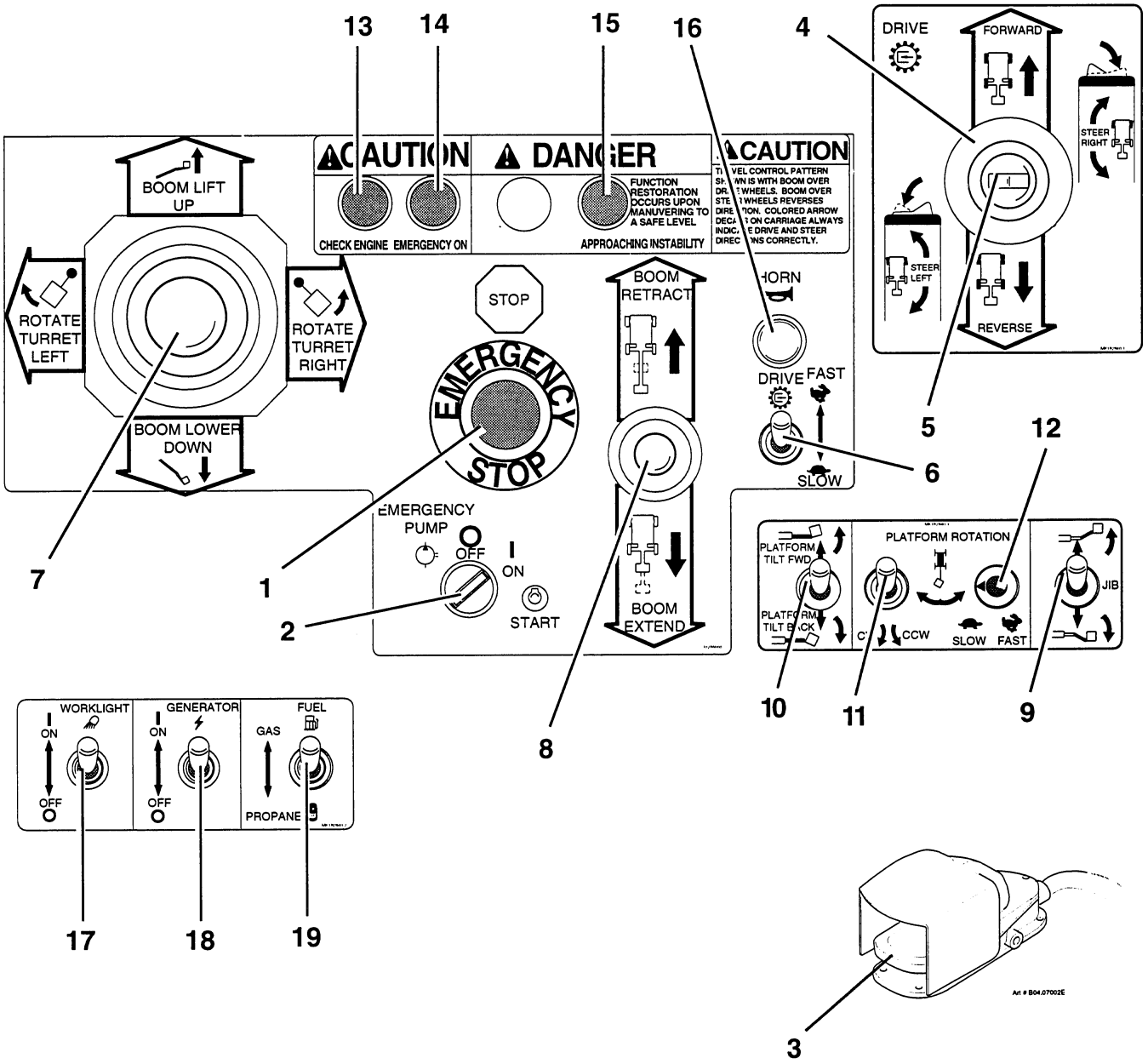
8. **Boom Retract/ Extend Lever.** Pull lever back to "BOOM EXTEND" to move boom "out".

   Push lever forward to "BOOM RETRACT" to move boom "in".

   Release lever to stop movement. The lever is spring centered to the "off" position.

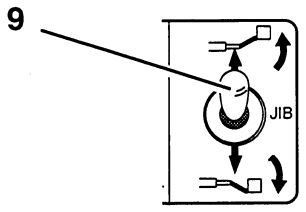
Controls and Instruments

Aerial Control Station



Controls and Instruments

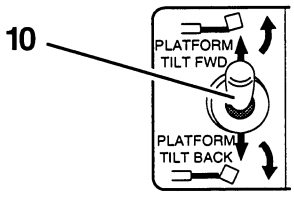
Aerial Control Station Controls Description (Continued)



9. **Jib Up/ Down Lever (only on TB50).** Press and hold toggle switch forward to "JIB UP" to lift the jib boom section.

   Press and hold toggle switch back to "JIB DOWN" to lower the jib boom section.

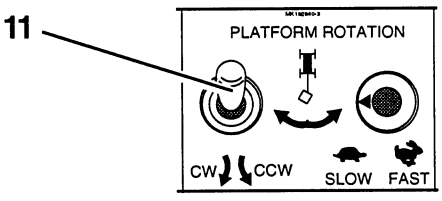
   Release lever to stop movement. The lever is spring centered to the "off" position.



10. **Platform Tilt Toggle Switch.** Press and hold toggle switch up to tilt the platform forward.

    Press and hold toggle switch down to tilt the platform back.

    Release toggle switch to stop movement. The switch is spring centered to the "off" position.



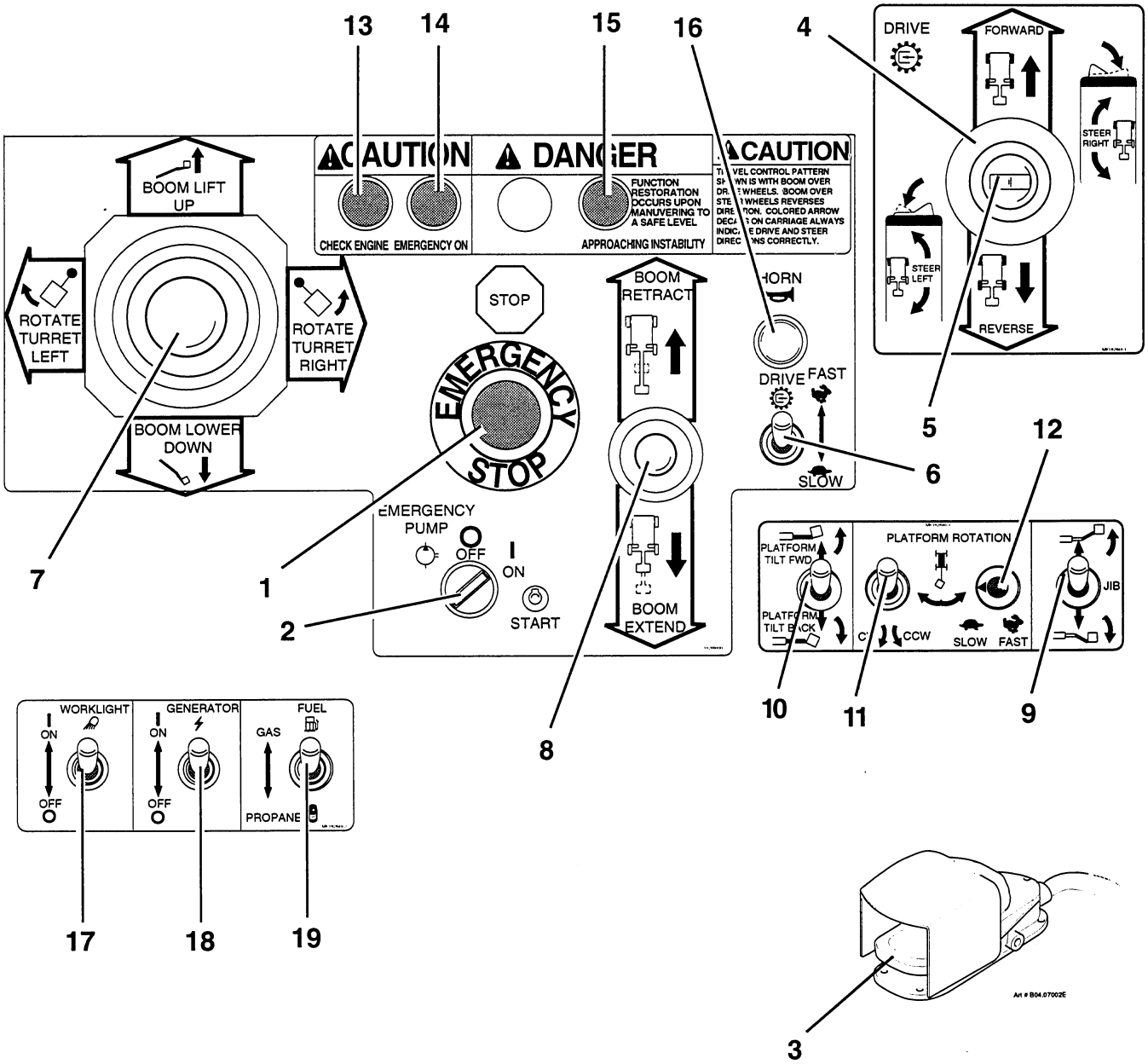
11. **Platform Rotate Toggle Switch.** Press and hold toggle switch to the left to rotate the platform left (counterclockwise).

    Press and hold toggle switch to the right to rotate the platform right or (clockwise).

    Release toggle switch to stop movement. The switch is spring centered to the "off" position.

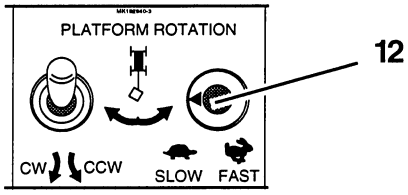
Controls and Instruments

Aerial Control Station

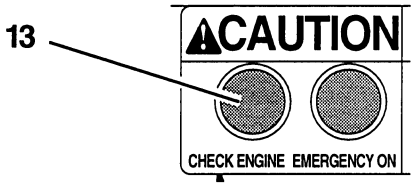


Controls and Instruments

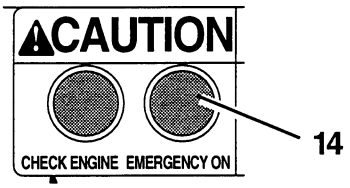
Aerial Control Station Controls Description (Continued)



12. **Platform Rotate Speed Control.** Turn clockwise toincrease platform rotation speed. Turn counterclockwise to decrease platform rotation speed.

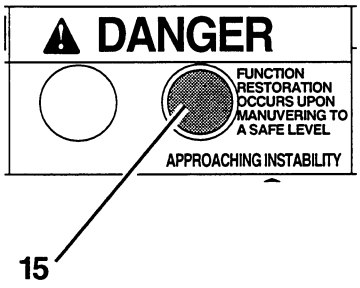


13. **Check Engine (Engine Distress) Light.** Red light and dual tone audible alarm turns on whenever there is low engine oil pressure, high engine coolant temperature or broken fan belt (if so equipped) or the emergency pump/ off/ on/ start switch is "ON" and the engine is not running. Engine will shut down automatically if condition does not correct itself in approximately 10 seconds.



14. **Emergency On Light.** Red light turns on whenever the key switch is turn to the emergency pump.

    Release to turn light off.

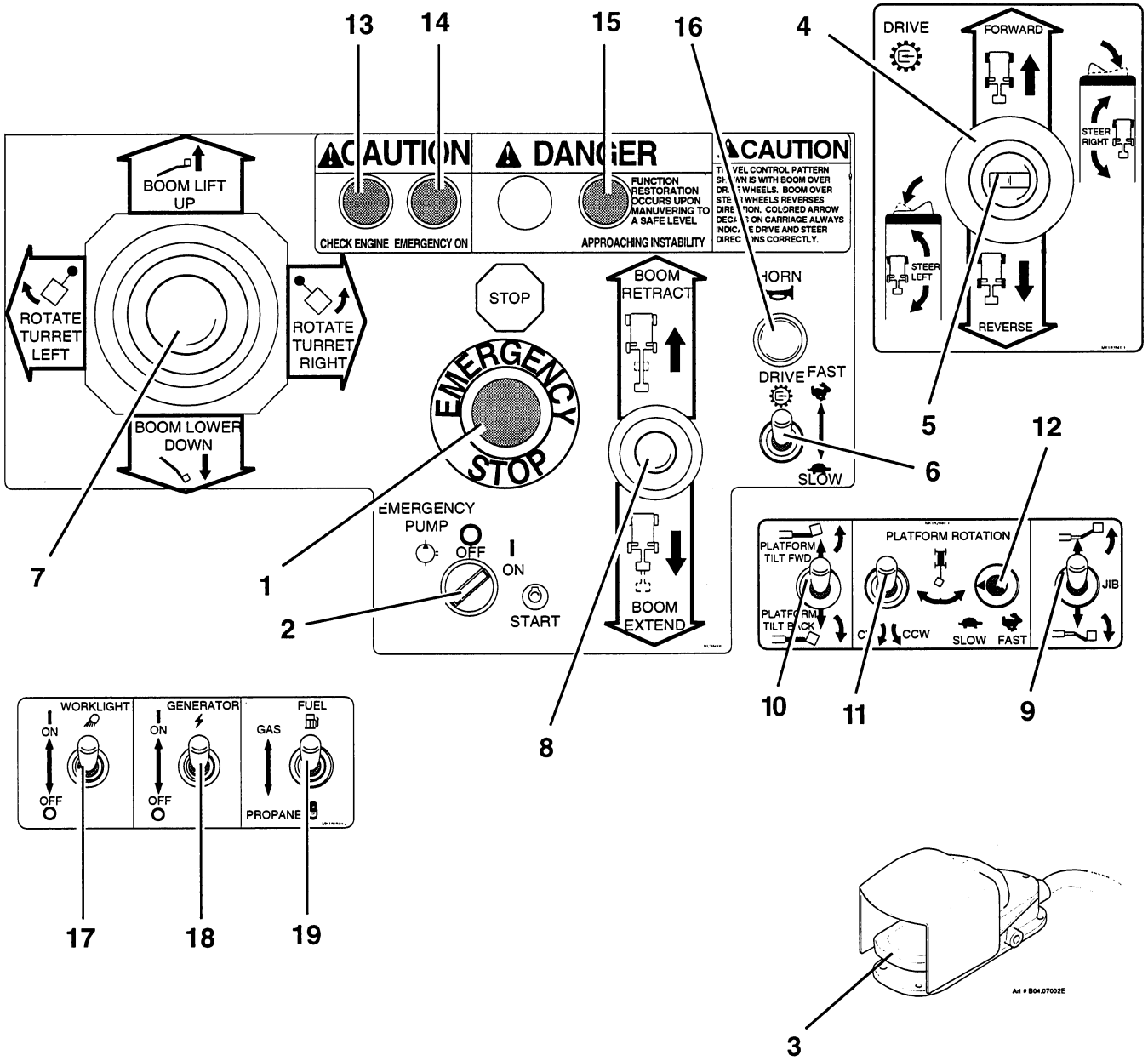


15. **Approaching Instability Light and Alarm.** Red light and dual tone audible alarm turn on to warn of unstable condition, when boom is out or up and aerial lift is on a 5° or greater slope. All functions will be inoperative except drive and steer.

    To restore full operation drive aerial lift back onto a slope less than 5°.

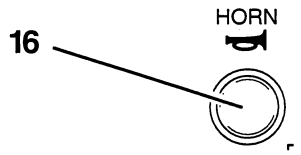
Controls and Instruments

Aerial Control Station



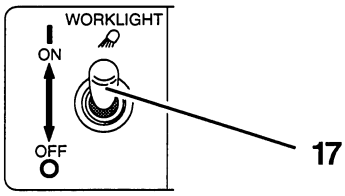
Controls and Instruments

Aerial Control Station Controls Description (Continued)



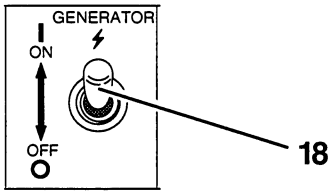
16. **Horn Button.** Press and hold button to sound "automotive type" warning horn.

    Horn is intended for use as a signal to personnel in the area and is not a "motion" or "travel" alarm.



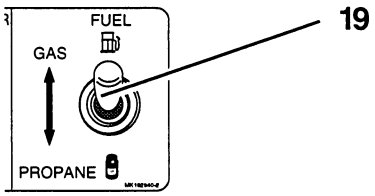
17. **Light Toggle Switch.** (Option) Turns on work lights. Move to "ON" to turn lights "on". Move to "OFF" to turn lights "off".

    Extensive use of light with engine off may affect battery.



18. **Generator Toggle Switch.** (Option) Turns on 110 VAC generator to provide electrical power to duplex receptacle in platform. Move to "ON" to turn generator "on". Move to "OFF" to turn generator "off".

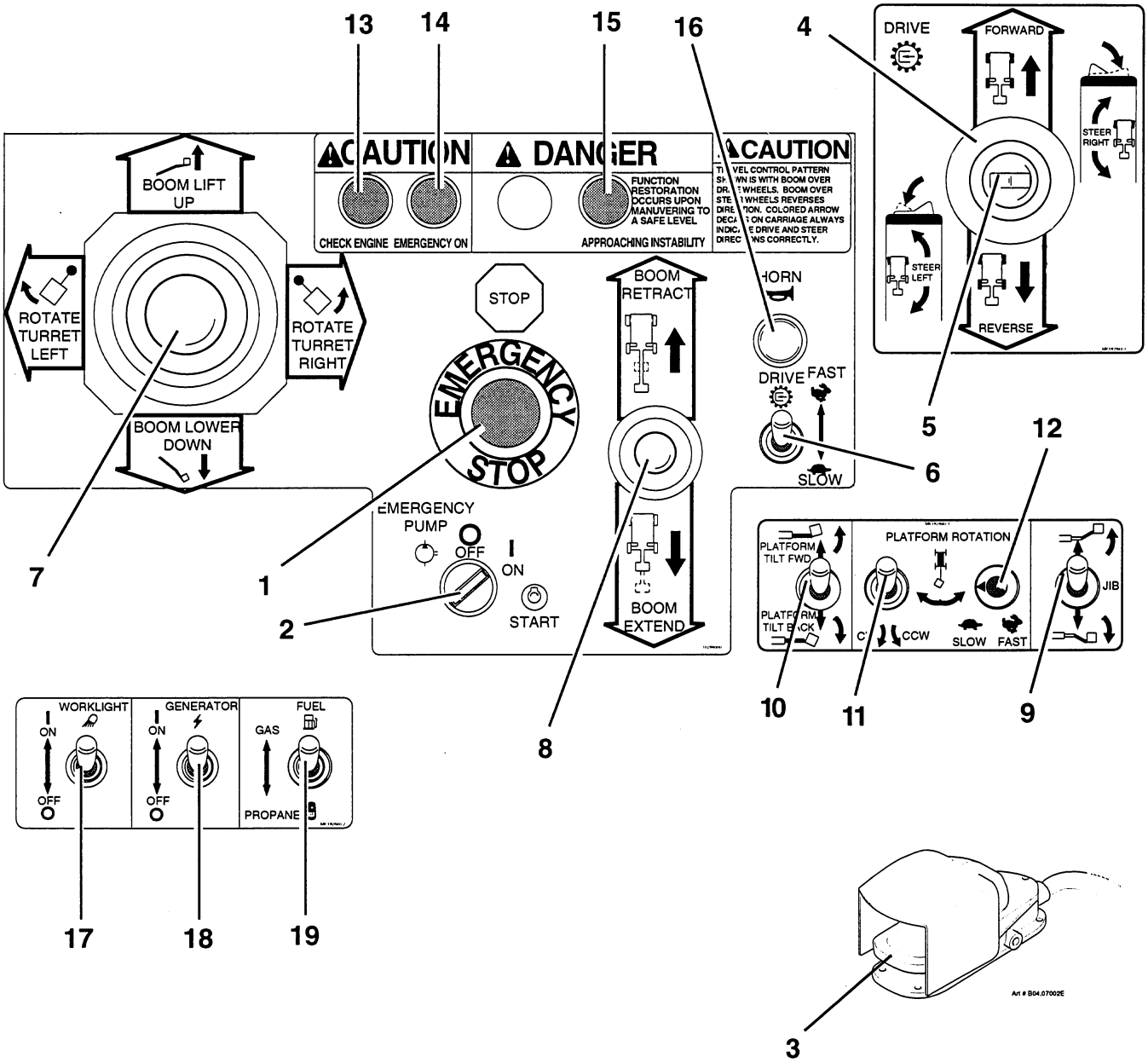
    Controls at aerial control station will not operate with generator switch to "ON".



19. **Fuel, Gas/ Propane Toggle Switch.** (Option) Used on some machines to switch from gas to propane and from propane to gas. Move to "GAS" to use gas as the fuel. Move to "PROPANE" to use propane as the fuel.

Controls and Instruments

Aerial Control Station



Controls and Instruments

Aerial Control Station Controls Description (Continued)

20. **Dual Fuel.** (Option) There is a T-Handle on the Ford engine to switch from gas to propane. Therefore, the dual fuel switch is plugged when the Ford engine is used.

21. **High Speed Drive Cutout.** With the platform raised, travel speed is automatically limited to 0.5 mph (0.8 kph). This condition is known as "creep" speed. To enable faster travel, move platform to the fully down and in position.

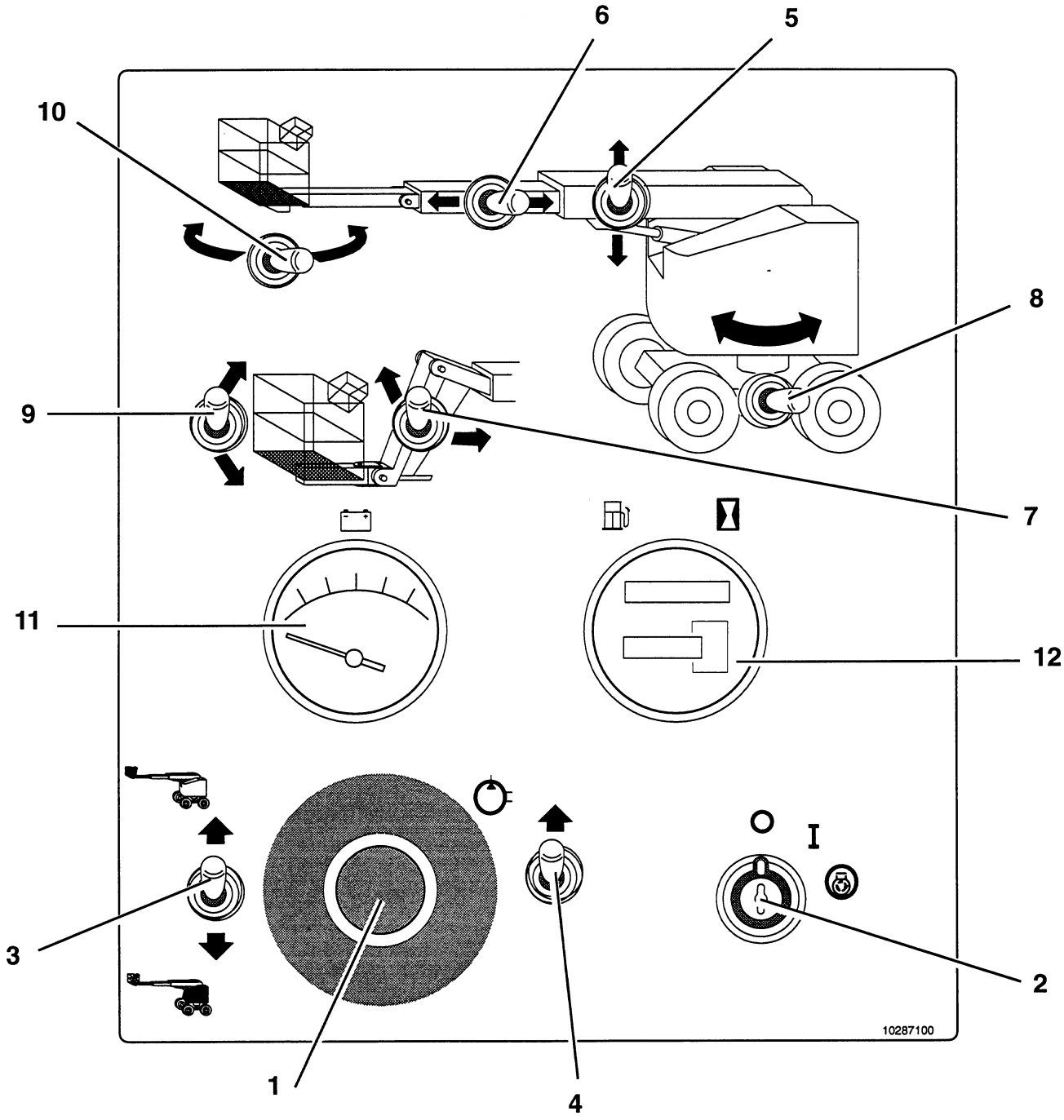
22. **Movement Alarm.** Sounds an audible warning whenever the aerial lift is in motion. Alarm will cease when motion stops.

23. **Travel Alarm.** Sounds an audible warning whenever the aerial lift DRIVE CONTROL LEVER is moved from center "off" position. Alarm will cease when DRIVE CONTROL LEVER is moved back to the center "off" position.

24. **Rotary Beacon.** A rotaing reflector with an amber light that is activated whenever the ignition is "on". A strobe type of rotary beacon is also used.

Controls and Instruments

Ground Control Station



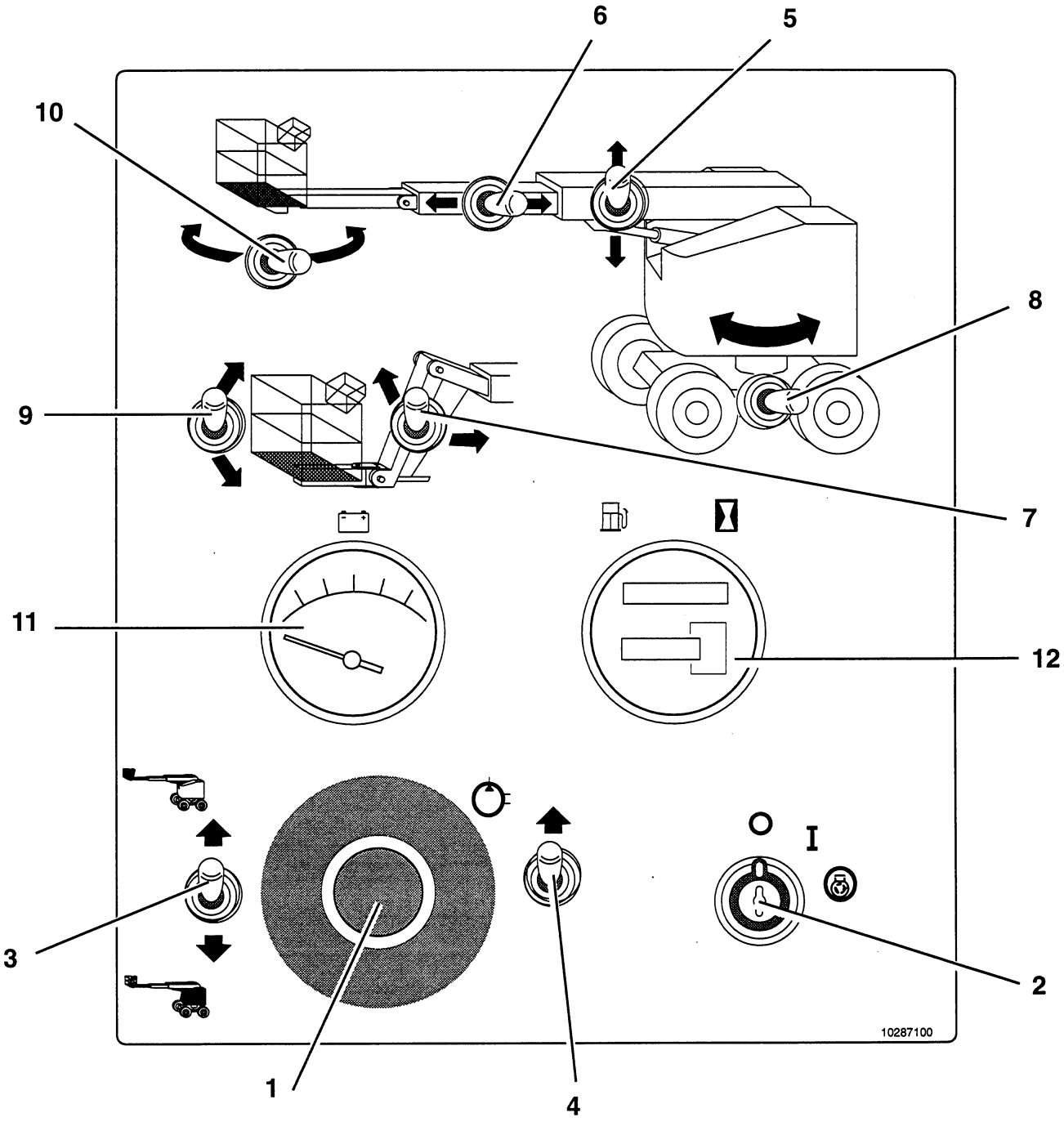
Controls and Instruments

Ground Control Station Controls Identification

Key No.	Control Description
1.	Emergency Stop Switch
2.	Off/ On/ Start Key Switch
3.	Ground/ Aerial Toggle Switch
4.	Emergency Pump Toggle Switch
5.	Boom Up/ Down Toggle Switch
6.	Boom Extend/ Retract Toggle Switch
7.	Jib Up/ Down Toggle Switch
8.	Rotate Turret Toggle Switch
9.	Platform Tilt Toggle Switch
10.	Platform Rotate Toggle Switch
11.	Voltmeter
12.	Hour Meter/ Fuel Gauge

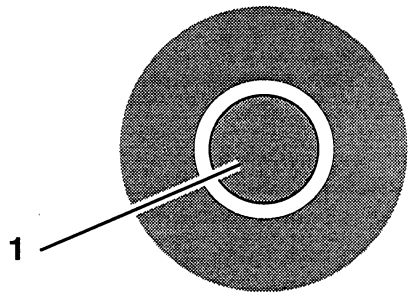
Controls and Instruments

Ground Control Station



Controls and Instruments

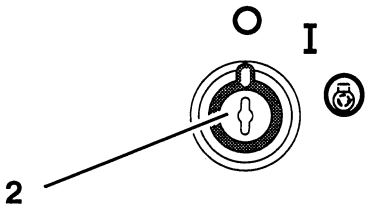
Ground Control Station Controls Description



1. **Emergency Stop Switch.** Push "in" to stop all functions in an emergency.

   Pull out or rotate clockwise (depending on style used) to release switch and restore all functions.

   The Emergency Stop switches at <u>both</u> the Aerial and Ground Control stations must be released to allow any functions to operate.

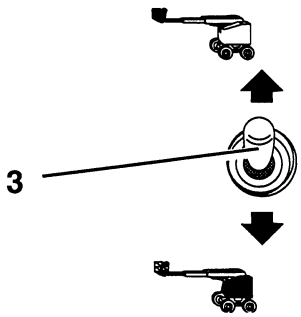


2. **Off/ On/ Start Key Switch.** Main power "On/ Off" three position switch. The straight up position is "OFF".

   Turn key right (clockwise) to turn power "ON".

   Turn key all the way and hold to start engine.

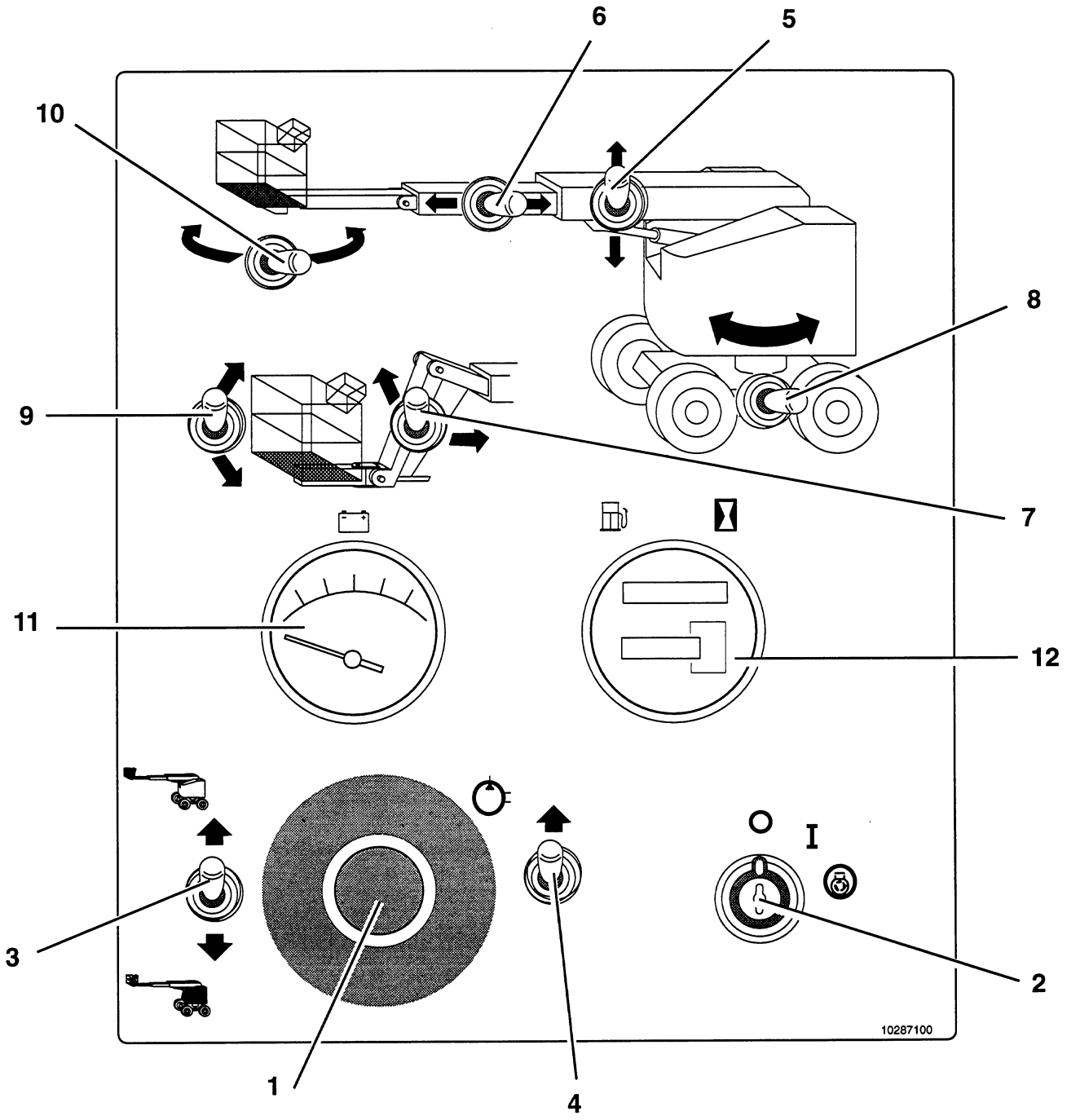
   With key switch "OFF", the key may be removed to prevent unauthorized operation.



3. **Ground/ Aerial Selector Toggle Switch.** The default position is up for Aerial Control operation. Move switch down and hold for ground control operation. Switch is spring loaded to return to the Aerial Control position.

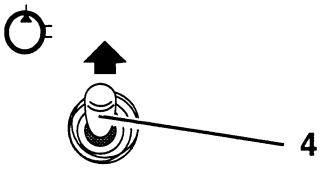
Controls and Instruments

Ground Control Station



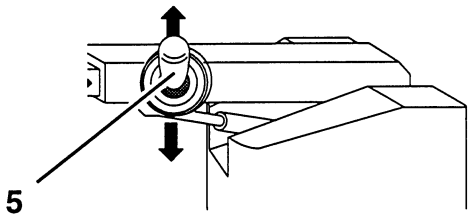
Controls and Instruments

Ground Control Station Controls Description



4. **Emergency Pump Toggle Switch.** Move toggle switch "up" and hold to activate the battery powered hydraulic pump, allowing operation of hydraulic functions (swing and boom) from the ground.

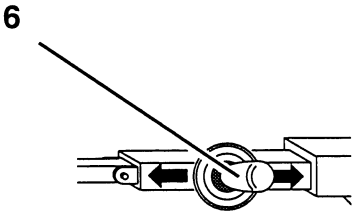
   To prevent emergency pump battery from completely discharging and the emergency pump from overheating, release the emergency pump switch to allow a 30 second rest period after every 30 seconds of operation



5. **Boom Up/ Down Toggle Switch.** Move toggle switch to "UP" to raise the boom.

   Move toggle switch to "DOWN" to lower the boom.

   Release toggle switch to stop movement. The switch is spring centered to the "off" position.



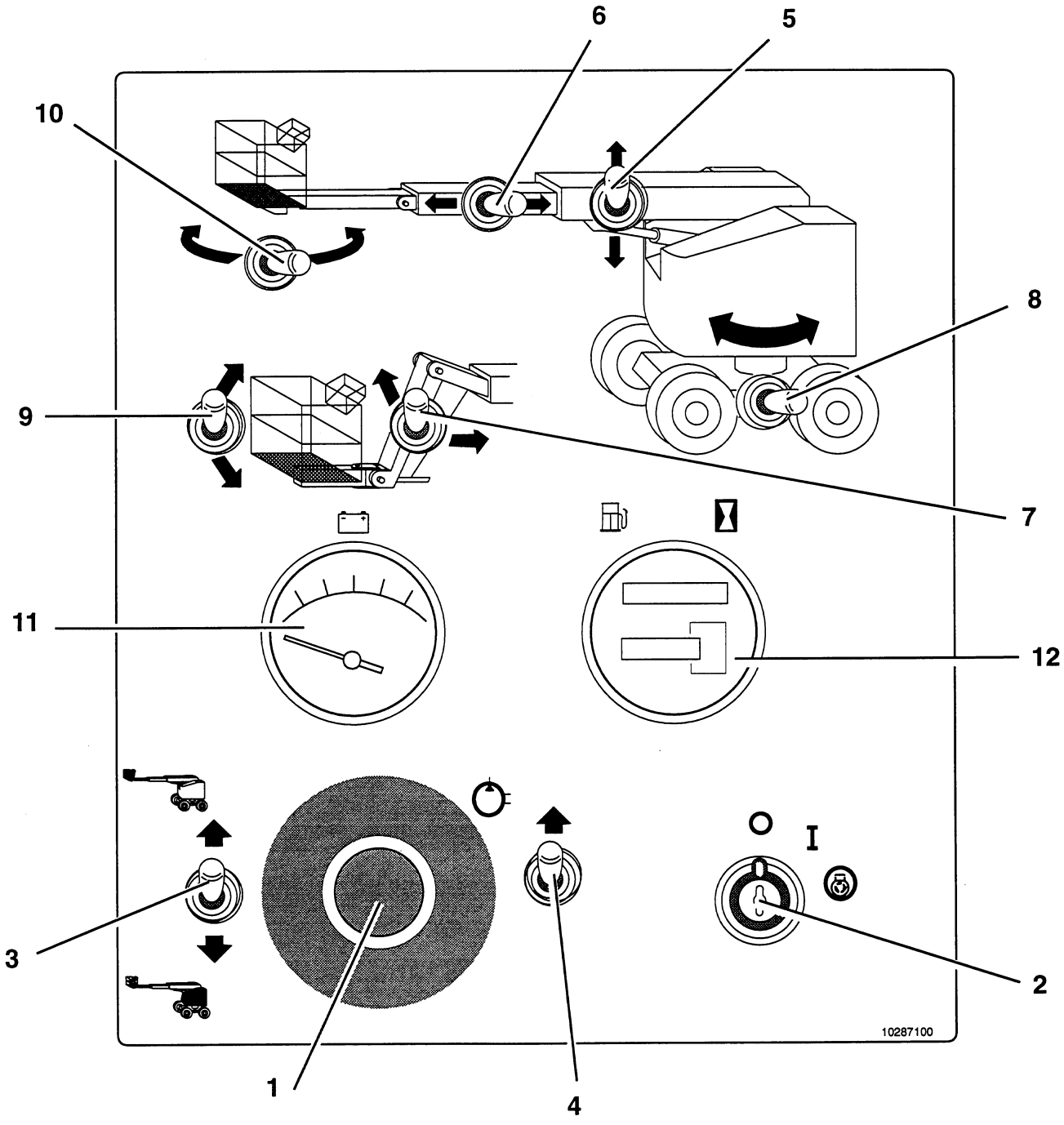
6. **Boom Extend/ Retract Toggle Switch.** Move toggle switch to "EXTEND" to move boom "out".

   Move toggle switch to "RETRACT" to move boom "in".

   Release toggle switch to stop movement. The switch is spring centered to the "off" position.

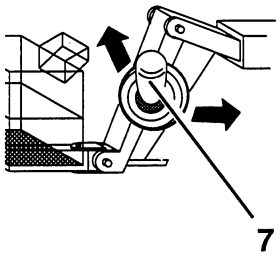
Controls and Instruments

Ground Control Station



Controls and Instruments

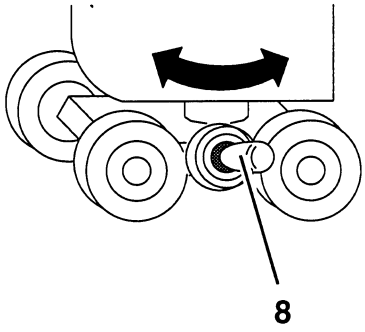
Ground Control Station Controls Description (Continued)



7. **Jib Down/ Up Toggle Switch.** Move toggle switch to "JIB UP" to raise the jib boom.

   Move toggle switch to "JIB DOWN" to lower the jib boom.

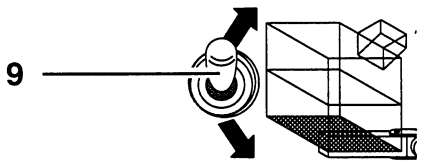
   Release toggle switch to stop movement. The switch is spring centered to the "off" position.



8. **Rotate Turret Toggle Switch.** Move toggle switch to "LEFT" to move the turret to the left (counterclockwise).

   Move toggle switch to "RIGHT" to move the turret to the right (clockwise).

   Release toggle switch to stop movement. The switch is spring centered to the "off" position.

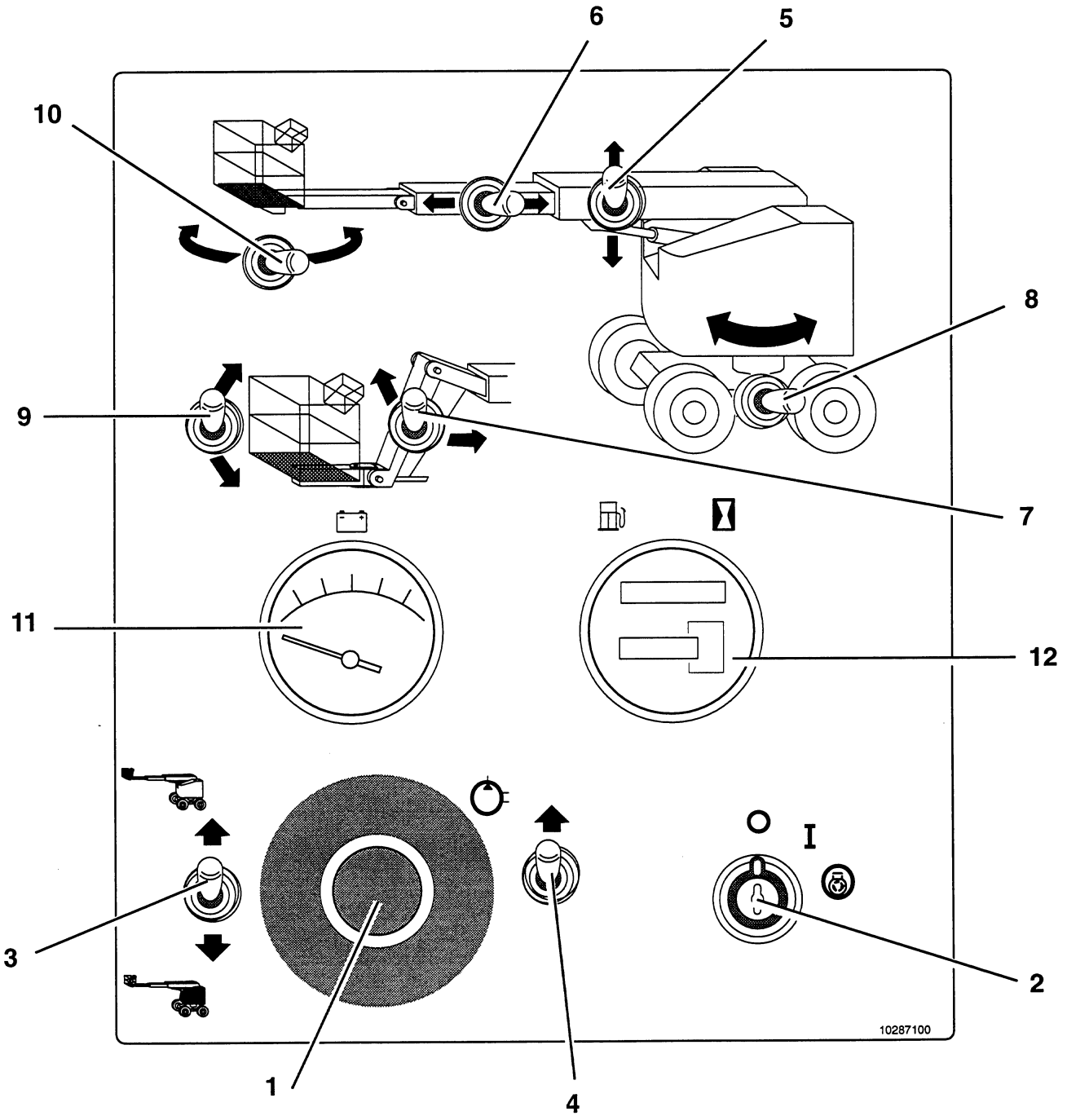


9. **Platform Tilt Toggle Switch.** Push up to tilt platform toward the boom. Push down to tilt platform away from the boom. Release switch to stop operation.

   Maximum platform tilt is 105° relative to angle of boom (+25° to -80° w/ boom @ horizontal).

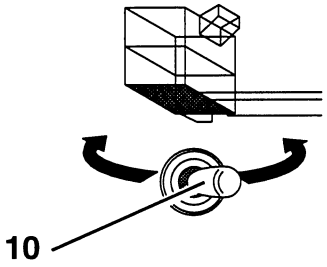
Controls and Instruments

Ground Control Station



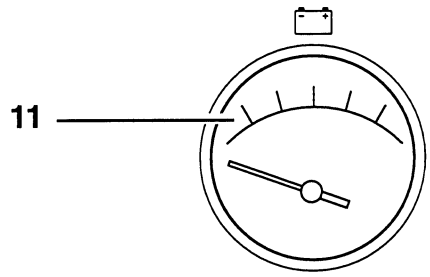
Controls and Instruments

Ground Control Station Controls Description (Continued)



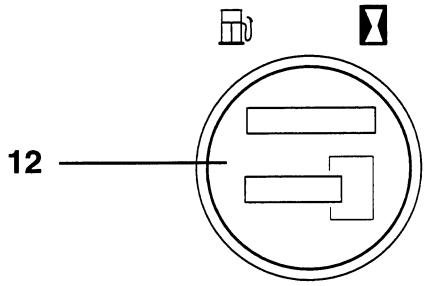
10. **Platform Rotate Toggle Switch.** Push left to rotate platform clockwise. Push right to rotate platform counterclockwise. Release switch to stop operation.

    Platform can be rotated 172° (86° to each side of center).



11. **Voltmeter.** Indicates battery supply voltage when "OFF/ ON/ START" key switch is turned to either "ON" or "START" and "EMERGENCY STOP SWITCH" is released.

    Gauge indicates alternator output voltage when engine is operating.



12. **Hour Meter/ Fuel Gauge.**

    Hour Meter - the digital hour meter indicates the total usage of the machine in hours and tenths. It is "on" and counting whenever the engine is operating.

    Fuel Gauge. Indicates fuel remaining (gasoline or Diesel fuel).

13. **T-Pull Handle Switch for Propane.** (Option) There is a T-Handle on the Ford engine to switch from gas to propane.

Before Operation Checks

Section 5

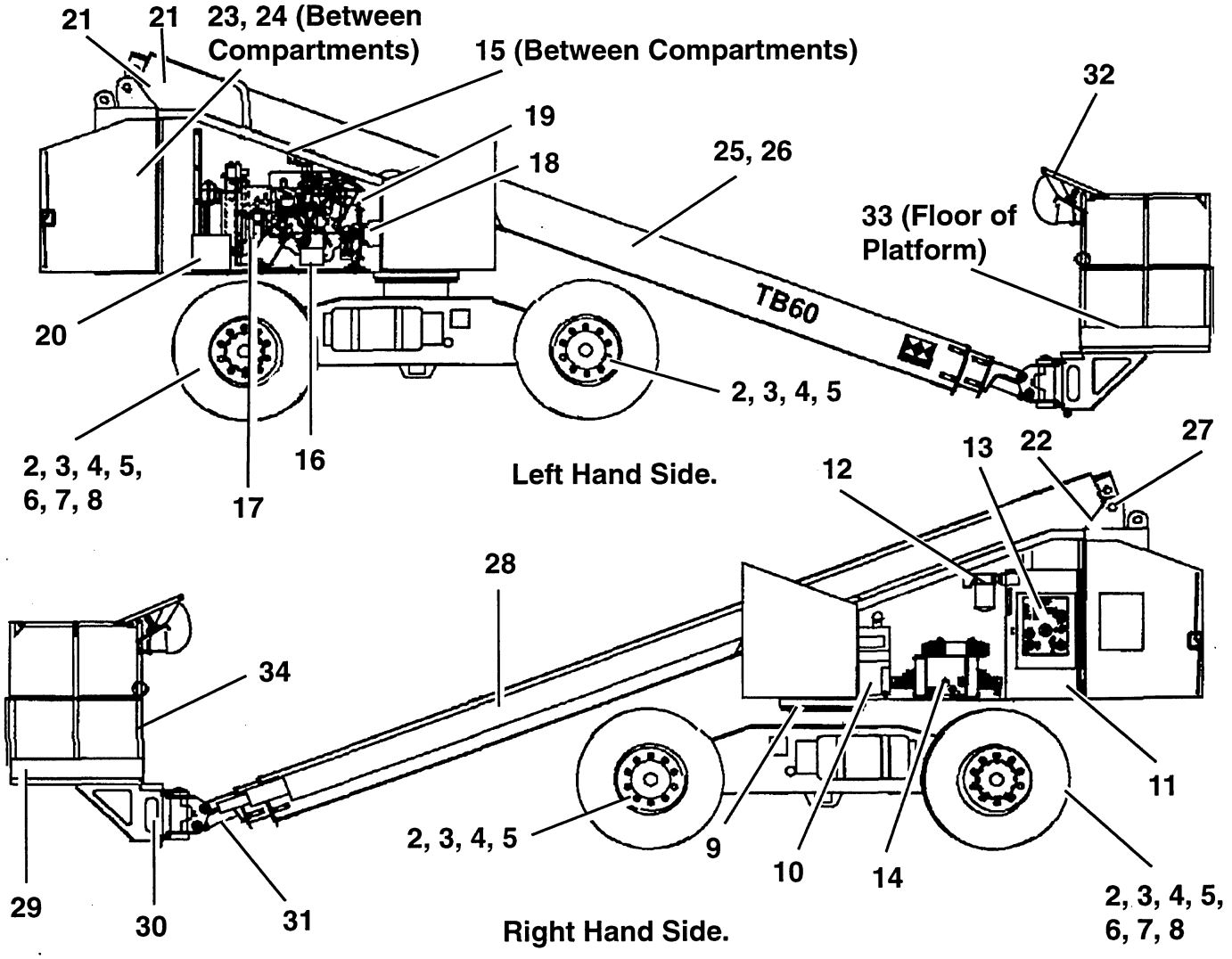
Before Operation Checks

What Needs to be Inspected?

Before each day's operation of the aerial lift, the operator **MUST** perform the General Inspection as outlined in the Check List that follows.

The purpose of the Operator's Inspection is to keep the aerial lift in proper working condition and to detect any signs of malfunction during normal operation between scheduled maintenance checks.

While it may not be the Operator's responsibility to perform mechanical maintenance, the Operator **MUST** be thoroughly familiar with the aerial lift and its proper care since their own safety is involved.



Before Operation Checks

Before Operation General Inspection Check List

Check each of the following items for security, leaks, missing components, hardware damage, evidence of cracks, deterioration, etc.

Check all visible wiring and hydraulic hoses for cracking, loose connections or wear.

If a problem is found with any of the following items notify your supervisor, **do not operate** the aerial lift.

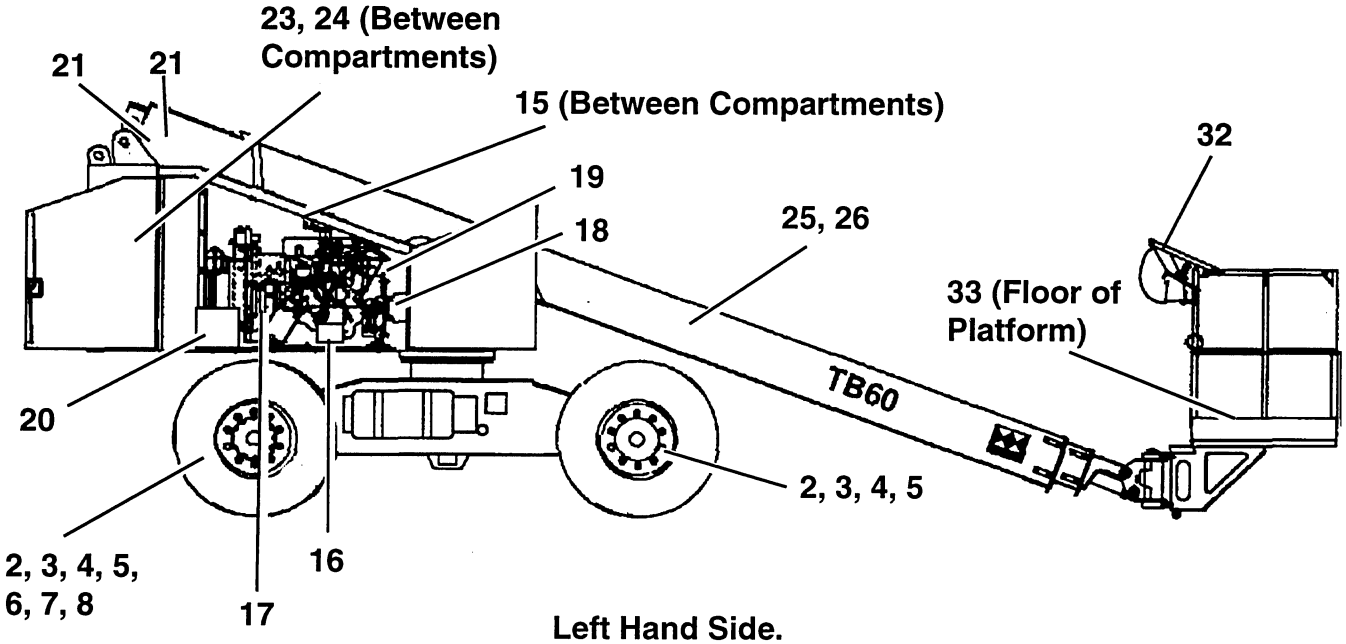
The operator is authorized to perform only the maintenance items listed in the "Maintenance" Section of this Manual. All other maintenance must be performed by a qualified Aerial Lift Technician.

NOTE: Ensure a copy of this manual is in the platform whenever aerial lift is operated.

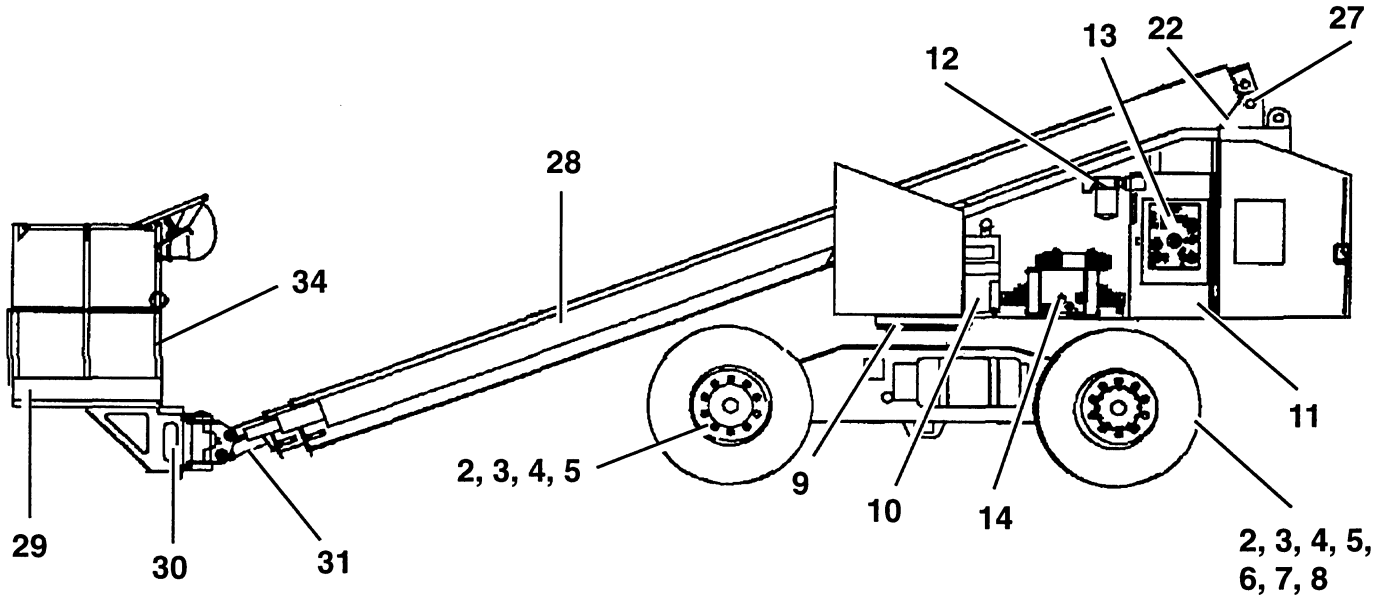
Item	Description
1.	General visual inspection of all machine components.
2.	Tires and Wheels.
3.	Drive Motors and Brakes.
4.	Torque Hubs.
5.	Wheel Lug Nuts.
6.	Steering Tie Rods and Ends
7.	Steering Yoke King Pins (4 places).
8.	Steering Cylinder.
9.	Turret Rotation Gear.
10.	Fuel Reservoirs.
11.	Hydraulic Reservoirs.
12.	Hydraulic Return Line Filter.
13.	Ground Control Station.
14.	Hydraulic Valve Assembly.
15.	Turret Rotation Gear Box Assembly.
16.	Battery.
17.	Engine Assembly.

Before Operation Checks

What Needs to be Inspected?



Left Hand Side.



Right Hand Side.

Before Operation Checks

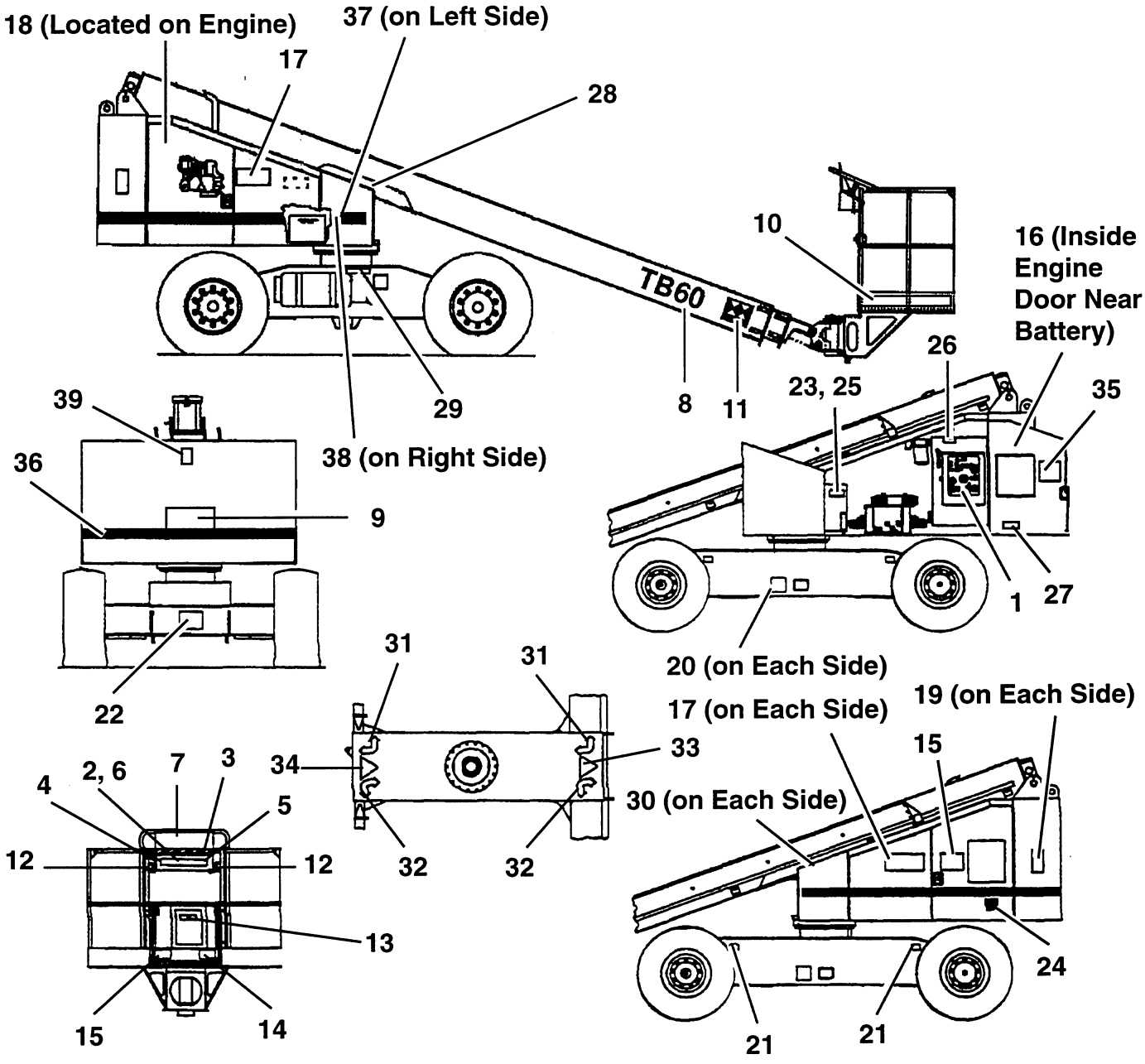
Before Operation General Inspection Check List (Continued)

Item	Description
18.	Hydraulic Pump (main).
19.	Hydraulic Pump (emergency).
20.	Engine Control Panel.
21.	Proximity Switches (2 places).
22.	Master Leveling Cylinder.
23.	Boom Lift Cylinder Installation.
24.	Boom Lift Cylinder Pins (2 places).
25.	Boom Assembly.
26.	Boom Extend Cylinder.
27.	Boom Pivot Installation.
28.	Power Track Assembly.
29.	Platform.
30.	Platform Rotator.
31.	Slave Leveling Cylinder.
32.	Aerial Control Station.
33.	Foot Operated Switch.
34.	Operator's Manual, Documents and Decals (see Following Pages).

Before Operation Checks

Safety and Control Decal Locations

Verify that each of the following decals are properly adhered to the machine, undamaged and legible. If a decal is missing, damaged or illegible, the decal must be replaced before operating the aerial lift.



Before Operation Checks

Decal Check List

Item No.	Part No.	Description	Qty.	Remarks
1	10287100	Decal, Ground Station Controls	1	
2	102840-2	Decal, Platform Controls, Main	1	
3	102840-1	Decal, Platform Controls, Drive/ Steer	1	
4	102840-3	Decal, Platform Control, Options	1	
5	102840-4	Decal, Platform Control, Functions	1	
6	102840-5	Decal, Platform Control, Warning Lights	1	
7	102839	Decal, "DANGER", Electrocution and Instructions, Platform	1	
8	MK182850	Decal, "TB60"	1	
	MK182859	Decal, "TB66"	1	
9	10288201	Decal, Terex Crown	1	
10	10284304	Decal, "TEREX"	2	
11	10288202	Decal, Terex Crown, 10"	1	
12	10288100	Decal, "CAUTION" Lanyard Attachment Only	2	
13	MK181113	Decal, Operations and Maintenance	1	
14	MK182307	Decal, Safety Belt First	1	
15	MK181319	Decal, Rated Load (Capacity 650 Lbs)	2	TB60
	MK181322	Decal, Rated Load (Capacity 500 Lbs)	2	TB66
16	12400-3	Decal, Booster Cable	1	
17	MK182122	Decal, Death or Injury	2	
18	12260-701	Decal, Fan Warning	1	
19	12400-223	Decal, "DANGER"	2	
20	MK20508	Decal, Transportation	2	
21	MK183101	Decal, Tire Replacement	4	
22	MK182865	Decal, NamePlate I.D.	1	TB60
	MK182866	Decal, NamePlate I.D.	1	TB66
23	MK181829	Decal, Gasoline	1	
	MK181830	Decal, Diesel	1	
24	MK185707	Decal, Power 110 VAC.	1	
25	MK181321	Decal, No Smoking	1	
26	10285600	Decal, Hydraulic System Fluid	1	
27	MK185702	Decal, Circuit Breaker	1	
28	MK182121	Decal, "DANGER" Crushing	1	
29	MK182821	Decal, Liquid Tank	1	
30	12400-243	Decal, "CAUTION" No Step	2	
31	MK182710	Decal, Directional Arrow, Blue	2	
32	MK182709	Decal, Directional Arrow, Green	2	
33	MK20462	Decal, Forward Arrow	1	
34	MK20461	Decal, Forward Arrow	1	
35	MK183405	Decal, General Checks and Operations	1	
36	10-287500	Decal, Stripe, red 5"	A.R.	
37	10-287300	Decal, Stripe, Chevron Left	1	
38	10-287400	Decal, Stripe, Chevron Right	1	
39	10-121600	Decal, "MADE IN USA"	1	

Before Operation Checks

What Should I Know?

A. Emergency Operation (From Ground Station - From Platform)
B. Before Operating the Aerial Lift
C. What Interlocks, Cutouts and Warnings Do I Have?
D. Platform Capacity
E. Platform Guardrail and Gate
F. Platform Surface
G. Operating Clearance Around Platform and Overhead
H. Platform Loads
I. Travel Surfaces
J. Wind Speed
K. Wheel Loads
L. Battery Care

A. Emergency Operation From Ground Station If Platform Controls Are Inoperable:

NOTE: Controls at the ground control station will be operable regardless of position of EMERGENCY STOP SWITCH at aerial control station.

1. Pull out or turn the **Emergency Stop Switch** on the ground control box clockwise (in direction indicated by the arrow) and **Off/ On/ Start** key switch is turned to "ON", start engine if not operating.

2. Move **Aerial/ Ground Selector Switch** to "GROUND" position and hold when operating functions.

3. Make sure no **hazards, material or personnel** are beneath the platform or boom.

4. Determine which function must be operated first to recover aerial lift, i.e. boom "in", turret rotate, or boom "down". Move boom "in" fully first, when possible, before moving boom down. **Operate** the appropriate function to allow the operator to safely return to the ground.

   NOTE: If engine cannot be started, the Emergency Pump must be used. If engine is running, operating the Emergency Pump will stop the engine.

5. Move and hold the emergency pump switch and operate the appropriate function.

Before Operation Checks

What Should I Know? (Continued)

Emergency Operation From Platform If Engine Fails To Start Or Main Hydraulic Pump Is Inoperable:

1. Have ground personnel check that **Emergency Stop Switch** at ground control station is released by turning knob clockwise and ensure that **Aerial/ Ground Selector Switch** is in the "AERIAL" position.

2. Make sure no **hazards, material or personnel** are beneath the platform or boom.

3. Determine which function must be operated first to recover aerial lift, i.e. boom "in", turret rotate, or boom "down". Move boom "in" fully first, when possible, before moving boom down. **Operate** the appropriate function to allow the operator to safely return to the ground.

4. Move the **Emergency Pump, Off/ On and Start Switch** to the "EMERGENCY PUMP" and hold, then operate the appropriate function to safely lower the platform.

   NOTE: To prevent emergency pump battery from completely discharging and the emergency pump from overheating, release the emergency pump switch to allow a 30 second rest period after every 30 seconds of operation.

Before Operation Checks

What Should I Know? (Continued)

B. Before Operating the Aerial Lift, Perform the Following Procedures:

- Visually inspect all exposed parts of the aerial lift and report all deficiencies. DO NOT OPERATE aerial lift until **ALL** deficiencies noted have been corrected!
- Refer to the Maintenance section and perform the periodic maintenance.
- Check the fuel tank level; fill if necessary. Check and/or fill the propane tank (if equipped).

Ground Checks:

- Move and hold the Aerial/ Ground Toggle Switch to the "GROUND" position.
- Start the engine.

⚠WARNING

DO NOT OPERATE THE MACHINE IF THESE CHECKS REVEAL ANY DEFECT OR ABNORMALITY.

- When performing the checks:

_____ Listen for any unusual noises.
_____ Check for any vibration.
_____ Test the "**Emergency Stop**" function. While operating a hydraulic function, press the Emergency Stop switch. All machine functions should stop. Reset Emergency Stop switch.
_____ Check for uneven or jerky operation.
_____ Check for hydraulic leaks.
_____ Check pivot pins for security. Ensure that all securing bolts are in place on each pin locking point.

Before Operation Checks

What Should I Know? (Continued)

B. Before Operating the Aerial Lift, Perform the Following Procedures (Continued):

Ground Checks (Continued):

- Move the boom down/up toggle switch to the "UP" position to raise the boom.
- Move the boom extend/retract toggle switch to the "EXTEND" position to move the boom out. Move toggle switch to the "RETRACT" position to move the boom in.
- On the TB50, move the jib boom down/up toggle switch to the "JIB UP" position to raise the jib boom. Move toggle switch to the "JIB DOWN" position to lower the jib boom.
- Move the rotate turret left/right toggle switch to the "LEFT" position to move the turret to the left. Move the toggle switch to the "RIGHT" position to move the turret to the right.
- Move the platform rotate toggle switch to the "LEFT" position to move the platform to the left. Move the toggle switch to the "RIGHT" position to move the platform to the right.
- Move the platform tilt toggle switch to the "UP" position to tilt the plaform toward the boom. Move the toggle switch to the "DOWN" position to tilt the platform away from the boom.
- Release the Aerial/ Ground Toggle Switch and all functions will stop. Switch will return to the Aerial position.

  IMPORTANT: All machine operations will stop upon release of the Aerial/ Ground Toggle Switch.

- Shut the engine off.

Before Operation Checks

What Should I Know? (Continued)

B. Before Operating the Aerial Lift, Perform the Following Procedures (Continued):

Platform Checks:

- Complete the Ground Operational Checks before you perform the Platform Checks.
- Ensure the Aerial/ Ground Toggle Switch is on "AERIAL".
- Enter the Platform. **Make sure** the entry gate at the platform entrance is closed and latched.
- Connect your fall protection to the platform.
- Start the engine.
- When performing the checks:

_____ Listen for any unusual noises.
_____ Check for any vibration, hydraulic leaks and pivot pins for security.
_____ Test the "**Emergency Stop**" function. While operating a hydraulic function, press the Emergency Stop switch. All machine functions should stop. Reset Emergency Stop switch.
_____ Check for uneven or jerky operation.

⚠WARNING

BE SURE BOOM TRAVEL AREA IS CLEAR OF OBSTRUCTIONS.

DO NOT OPERATE THE MACHINE IF THESE CHECKS REVEAL ANY DEFECT OR ABNORMALITY.

- Depress the foot operated switch, mounted on the floor of the platform.
- Press the horn button briefly to check that the horn works.

Before Operation Checks

What Should I Know? (Continued)

B. Before Operating the Aerial Lift, Perform the Following Procedures (Continued):

Platform Checks (Continued):

⚠WARNING

ACTUATION OF THE RED "EMERGENCY STOP" SWITCH WILL APPLY BRAKES IMMEDIATELY!

THIS MAY CAUSE UNEXPECTED PLATFORM MOVEMENT AS THE MACHINE COMES TO A SUDDEN STOP.

- While operating a boom or drive function, press the **emergency stop** switch on the platform control console. All machine functions should stop. Reset emergency stop switch and start the engine.

- Move the drive lever to the "FORWARD" position to move the aerial lift forward.

  NOTE: The normal drive configuration is with the boom located over the non-steering wheels. This provides the best weight distribution for maximum traction. If the boom is rotated 180° the drive and steer decals read in reverse; therefore, the operator must reverse the drive and steer functions in order to move in the desired direction. The arrow type decals on each end of the base demonstrates the direction of the base without regard to the position of the turret.

- While driving, move the steer switch to the "LEFT" position to steer the aerial lift to the left. Move the steer switch to the "RIGHT" position to steer the aerial lift to the right.

- Move the drive lever to the "REVERSE" position to move the aerial lift backward.

Before Operation Checks

What Should I Know? (Continued)

B. Before Operating the Aerial Lift, Perform the Following Procedures (Continued):

Platform Checks (Continued):

- Move the boom lift/ rotate turret lever to the "UP" position to raise the boom.

  NOTE: The aerial lift is equipped with fully proportional controls. When using any proportional function, move the control lever "gradually' in the desired direction. The control lever is spring-centered and will return to the "OFF" position when released.

- Move the boom extend/retract lever to the "EXTEND" position to move the boom out. Move lever to the "RETRACT" position to move the boom in.

- On the TB50, move the jib boom toggle switch to the "JIB UP" position to raise the jib boom. Move toggle switch to the "JIB DOWN" position to lower the jib boom.

- Move the boom lift/ rotate turret lever to the "LEFT" position to move the turret to the left. Move the lever to the "RIGHT" position to move the turret to the right.

- Move the platform rotate toggle switch to the left to rotate the platform counterclockwise. Move the toggle switch to the right to rotate the platform clockwise.

- Move the platform tilt toggle switch forward to tilt the platform toward the boom. Move the toggle switch to backward to tilt the platform away from the boom.

- Return the boom to the stowed position.

- Move all levers and switches back to their "neutral" positions. Release the foot switch.

  IMPORTANT: All machine operations will stop upon release of the foot switch.

- Shut the engine off.

Before Operation Checks

What Should I Know? (Continued)

C. What Interlocks, Cut-Outs and Warnings Do I Have?

Operating Instructions To Check Interlocks, Cut-Outs and Warnings

1. Approaching Instability Warning Light and Alarm

The aerial lift is equipped with an "APPROACHING INSTABILITY" Warning Light and Alarm. When the alarm is "on" the aerial lift is in a potentially unsafe out-of-level or unstable position and all "boom" functions will be disabled. An unsafe out-of-level condition is defined as the boom being either raised or extended and the aerial lift is tilted at an angle greater than 5° from the front to the rear or from side to side.

The unsafe condition is indicated by a red warning light located on the top center of the aerial control station and an audible "dual-tone" alarm. When the "APPROACHING INSTABILITY" Warning Light and Alarm turn "on" the boom and jib boom, turret rotate, platform rotate and platform tilt functions will not operate. The drive and steer operations are not affected and will operate. Should the "APPROACHING INSTABILITY" Warning Light and Alarm come on, maneuver the aerial lift back in the direction it was previously driven from until it is once again on a safe level operating surface. When the "APPROACHING INSTABILITY" Warning Light and Alarm turn "off" all functions will be restored.

To Determine if Approaching Instability Warning Light and Alarm is Operational:

a. Simple test of "APPROACHING INSTABILITY" Warning Light and Alarm: Red light is on and the audible alarm sounds when the tilt sensor goes beyond a 4.5° slope. By hand push the tilt sensor beyond 5° (can be determined by the level indicator on top of the tilt sensor); red light and alarm should turn on. Try operating a boom function from ground; boom function should not operate.

Before Operation Checks

What Should I Know? (Continued)

C. What Interlocks, Cut-Outs and Warnings Do I Have?

Operating Instructions To Check Interlocks, Cut-Outs and Warnings

1. Approaching Instability Warning Light and Alarm (Continued)

To Determine if Approaching Instability Warning Light and Alarm is Operational (Continued):

b. Operational test of "APPROACHING INSTABILITY" Warning Light and Alarm:

Move the boom fully "in" (retract) and down.

With the drive speed select switch to "LOW", drive the aerial lift onto a slope slightly greater than 5° but not greater than 10°. Be sure the platform is pointed downthe slope. Drive the aerial lift partially up the slope and come to a complete stop. Release the foot operated switch. The "APPROACHING INSTABILITY" Warning Light and Alarm should turn "on". **DO NOT** operate the aerial lift if the alarm does not turn on.

If the alarm turns "on", step down on pedal of the foot operated switch (the alarm will turn off) and operate the "BOOM IN/ OUT" control lever to extend the boom out slightly. The alarm should turn "on" and the boom function should stop. **DO NOT** continued to operate the function if the alarm does not turn "on" or if the boom out function does not stop.

If the alarm turns "on" and the boom out function stops, check the other functions to ensure that they are not operable. **DO NOT** use the aerial lift if any function other than the drive or steer are operable.

To turn off the "APPROACHING INSTABILITY" Warning Light and Alarm and regain full operation of the controls, drive the aerial lift back down the slope onto a level surface. Drive in a slow controlled manner with the platform pointed down the slope. With the aerial lift on a slope less than 5° the alarm will turn off and operation will be restored.

Before Operation Checks

What Should I Know? (Continued)

C. What Interlocks, Cut-Outs and Warnings Do I Have?

Operating Instructions To Check Interlocks, Cut-Outs and Warnings

2. Fast Drive Speed Cut-out

The aerial lift is equipped with a fast drive speed cut-out. When the boom is slightly raised or extended the aerial lift's drive speed is limited to a maximum of 0.5 mph (0.8 kph). To obtain the maximum travel speed of 3.0 mph, move the boom fully retracted and lowered and select "FAST" with the Drive Speed Select Toggle Switch.

To Determine if Fast Speed Cut-out is Operational:

Boom Extended

a. Select a test area having a smooth, prepared surface and one which is free from any obstacles, personnel or any other hazards to travel.

b. Position the platform with the boom centered over the non-steering end. Raise the boom sufficiently far to prevent the platform from contacting the ground and extend the boom approximately 24 inches.

c. Place the Drive Speed Select Toggle Switch to "SLOW".

d. Straighten the wheels and drive the aerial lift carefully in reverse a short distance, then forward a short distance.

e. Place the Drive Speed Select Switch to "FAST" and drive the aerial lift carefully in reverse a short distance, then forward a short distance.

The aerial lift should have traveled at the same speed during both tests. If it does not, **do not operate** the aerial lift until repairs have been made by a qualified technician.

f. Lower the platform to the “fully down” and "fully retracted" position.

Before Operation Checks

What Should I Know? (Continued)

C. What Interlocks, Cut-Outs and Warnings Do I Have?

Operating Instructions To Check Interlocks, Cut-Outs and Warnings

2. Fast Drive Speed Cut-Out

Boom Raised

a. Select a test area having a smooth, prepared surface and one which is free from any obstacles, personnel or any other hazards to travel.

b. Position the platform with the boom centered over the non-steering end. Raise the boom up to slightly more than 15° above horizontal (platform elevated approximately 15 feet)..

c. Place the Drive Speed Select Toggle Switch to "SLOW".

d. Straighten the wheels and drive the aerial lift carefully forward a short distance, then in reverse a short distance.

e. Place the Drive Speed Select Switch to "FAST" and drive the aerial lift carefully forward a short distance, then in reverse a short distance.

The aerial lift should have traveled at the same speed during both tests. If it does not, **do not operate** the aerial lift until repairs have been made by a qualified technician.

f. Lower the platform to the "fully down" and "fully retracted" position.

Before Operation Checks

What Should I Know? (Continued)

C. What Interlocks, Cut-Outs and Warnings Do I Have?

Operating Instructions To Check Interlocks, Cut-Outs and Warnings

3. Engine Distress Light

Engine Distress Light is designed to notify the operator when there is low engine oil pressure, high engine coolant temperature or broken fan belt (if so equipped).

Engine will shut down automatically if condition does not correct itself in approximately 10 seconds.

4. Movement Warning

Sounds an audible warning whenever the aerial lift is in motion. Alarm will cease when motion stops.

5. Travel Warning

Sounds an audible warning whenever the aerial lift DRIVE CONTROL LEVER is moved from center "off" position. Alarm will cease when DRIVE CONTROL LEVER is moved back to the center "off" position.

6. Rotary Beacon Warning

A rotating reflector with an amber light that is activated whenever the ignition is "on".

Before Operation Checks

What Should I Know? (Continued)

D. Platform Capacity

- **The capacity of the platform** is posted on decals on the platform and in the "Specifications" section of this manual.
- The platform capacity is equal to the **combined weight of personnel, tools and supplies** to be carried in the platform. The combined weight of personnel, tools and supplies **must not exceed** the posted platform capacity.
- Do not exceed the **maximum number of personnel** allowed on the platform. This information is posted on decals on the platform and can be found in the "Specifications" section of this manual.

E. Platform Guardrails and Gate

- **Make sure** the platform guard rails do not have any cracked or broken welds and toe plates are not bent or deteriorated.
- Once in the platform, ensure that the entry gate is **closed and latched.**

F. Platform Surface

- **Make sure** the platform floor surface is undamaged and free of oil, grease, loose materials or other substances which could cause a slip or fall and that the view directly below the floor is unobstructed.

G. Operating Clearance Around Platform and Overhead

- **Be sure** the area through which you will be moving the aerial lift is free of obstacles.
- **Check clearances** overhead, under and around the intended range of movement before: moving the platform up or down; moving the boom in or out, or traveling.
- Use a lookout if necessary! Always **look in the direction of intended movement** of the aerial lift or platform, and maintain safe distances.

Before Operation Checks

What Should I Know? (Continued)

H. Platform Loads

- **The capacity of the platform** is based on the **even distribution of weight** in the platform. Position all personnel, tools and supplies on the platform to ensure an even distribution of weight.
- **Position** tools and supplies so that personnel on the platform do not **trip over or collide** with them.
- **Position** tools and supplies so that they are not **accidentally knocked off** the platform.

I. Travel Surfaces

- Surfaces to be traveled should be:
  - Able to **support the weight** of the aerial lift and its contents.
  - **Level** whenever the platform is elevated.
  - Free from **bumps and potholes**.
  - Clean and free of **debris and obstacles**.
- Make sure the **grades to be traveled** do not exceed the capabilities of the machine. Refer to "Specifications" and "Operation" sections for maximum front-to-back and side-to-side grades.
- **Ramps must be strong enough** to support the weight of the aerial lift and its contents, and wide enough to provide sufficient side clearance beyond the wheels. Refer to the "Specifications" section of the manual for weight and dimensions.

Before Operation Checks

What Should I Know? (Continued)

J. Wind Speed

- The **wind speed**, if the aerial lift will be exposed to wind during operation.
- The **maximum wind speed rating** of the aerial lift with platform raised (refer to "Specifications" section). Wind speeds in excess of the rated figure may cause the aerial lift to tip over.
- The wind speed rating is based on the surface area of the platform and boom; and personnel, tools and supplies on the platform. If **items with a large surface area** are being carried on the platform, the wind speed at which the aerial lift can be safely operated is reduced.

K. Wheel Loads

- The Maximum Wheel Load (weight of the wheels on the surface when aerial lift is fully loaded) can be found on the Identification Plate posted on the aerial lift, and also in the "Specifications" Section of this manual.
- The surfaces to be traveled must be able to support these loads.
- Wheel loads are based on the load in the platform being evenly distributed.

Before Operation Checks

What Should I Know? (Continued)

L. Battery Care

⚠WARNING

BATTERY ACID CAN CAUSE SERIOUS BURNS. IF ACID COMES IN CONTACT WITH SKIN OR EYES, IMMEDIATELY FLUSH WITH WATER. SEEK MEDICAL ATTENTION.

Avoid Battery Hazards!

- **Batteries produce flammable and explosive gases**. They must be charged in a **well-ventilated area**. Keep electric arcs, sparks, flames, and lit cigarettes (pipes, cigars, etc.) away from batteries.
- **Battery acid will damage eyes or skin on contact.** Always wear a **face shield** during battery maintenance to avoid getting acid in eyes. Always wear **rubber gloves** and **protective clothing** to keep acid off skin.
- Never **check the battery** by placing a metal object across the posts. **Serious burns** or an **explosion** can result.

Checking Battery Water Level

When checking the water level, **do not allow dirt to enter** into the battery cells once the caps have been removed. Take particular care to avoid **setting the caps down on a dirty surface**. **Replace the caps immediately** after checking the water level.

Filling the Battery

- Always use a battery filler bottle (or funnel) and **distilled water**.
- If the battery water level is below the top of the lead plates, add only enough water to **barely cover the plates**.

Operation

Section 6

Operation

A complete description of the individual controls and their operation can be found in the "Controls and Instruments" Section of this manual. The operator must read and understand the functions of **all** controls before operating the aerial lift.

Complete the "Before Operations Check" before operating the aerial lift.

If the aerial controls are inoperable, see "Emergency Operation" in the "Before Operation Checks" Section.

⚠ DANGER

IF THE MACHINE FAILS WHILE THE PLATFORM IS RAISED, DO NOT ATTEMPT TO CLIMB DOWN THE BOOM ASSEMBLY. SERIOUS INJURY MAY RESULT.

⚠WARNING

THE OPERATOR MUST READ AND UNDERSTAND ALL OF THE INSTRUCTIONS IN THIS MANUAL BEFORE OPERATING THE AERIAL LIFT.

⚠WARNING

THE OPERATOR MUST BE AWARE OF THE GROUND CONDITIONS. DO NOT RAISE THE PLATFORM IF THE AERIAL LIFT IS NOT ON A FIRM LEVEL SURFACE.

Operation

Things You Need to Know

A. Engine Operation

Stopping the Engine

Engine can be stopped by pushing "in" on the "EMERGENCY STOP SWITCH" at either ground control or aerial control station. Engine can also be stopped by turning the EMERGENCY PUMP, OFF/ ON/ START SWITCH at the aerial control station to "OFF" or turn the OFF/ ON/ START KEY SWITCH at the ground control station to "OFF".

Starting the Engine

From the ground control station: Pull "out" or rotate clockwise the Emergency Stop Switch at the ground and aerial control stations. Turn OFF/ ON/ START KEY SWITCH to the "START" position. Release switch after engine starts.

From the aerial control station: Pull "out" or rotate clockwise the Emergency Stop Switch at ground control station. EnsureAERIAL/ GROUND SELECTOR SWITCH is in the "AERIAL" position. Enter platform, close and latch entry gate. Attach fall protection to the designated attaching point. Pull "out" or rotate clockwise the Emergency Stop Switch at aerial control station. Turn the EMERGENCY PUMP, OFF/ ON/ START SWITCH to the "START" position. Release switch after engine starts. **Do not** step down on foot operated switch while starting the engine, starter will not operate.

Note: If engine fails to start and EMERGENCY PUMP, OFF/ ON/ START SWITCH has been released, turn switch to "OFF" before returning to "START", starter will not operate otherwise.

Operation

Things You Need to Know

B. Dual Fuel System

The aerial lift may be equipped with an optional dual fuel system which enables the selection of either gasoline or propane gas (LPG) for operation. On a Ford engine, the T-PULL HANDLE for propane is located at the bottom of the ground control station. For other engines a GAS/ PROPANE fuel switch is located on the aerial control. The engine can be started or operated on either type of fuel, as long as there is sufficient quantity present.

Switching from gasoline to propane: Open valve on propane tank. Pull T-HANDLE "out" to select propane.

Switching from propane to gasoline: Close valve on propane tank. Push T-HANDLE "in" to select gasoline.

Note: It is not necessary to stop the engine when changing to a different fuel type.

C. Traveling on Level Surfaces

- The platform can be raised or lowered when traveling on prepared, level surfaces.
- With the platform raised above horizontal and/or the boom extended, aerial lift will only travel at the slowest speed (See "Specifications").

1. **Read and familiarize yourself** with the "Controls and Instruments" and "Before Operation Check" Sections of this manual prior to traveling. Complete all "before operation" checks and inspections.

2. **Travel surface** must be prepared, and the travel path free from hazards such as potholes and bumps.

3. Before traveling, make sure the **path of travel** is clear of personnel, power lines, equipment or any obstructions or debris which could cause a collision or present a hazard.

Operation

Things You Need to Know

C. Traveling on Prepared Level Surfaces (Continued)

4. **Consider all factors** such as surface condition, side and/ or vertical clearances, number of personnel in or about working area before choosing a "FAST" or "SLOW" traveling speed.

   Refer to Item "E", later in this section for instructions on "fast speed" travel.

⚠WARNING

WITH THE PLATFORM SWUNG OVER THE STEERING WHEELS, USE CAUTION WHEN SELECTING THE TRAVEL OR STEER DIRECTION.

TRAVEL AND STEER DIRECTION WILL BE OPPOSITE TO DRIVE CONTROL LEVER OR STEER SWITCH MOVEMENT.

The following directions assume the platform is in its "normal" position to the steering wheels.

5. Drive the aerial lift by engaging the Foot Operated Switch and operating the Drive/ Steer Control Lever forward to drive the aerial lift forward, and back to drive in reverse.

   Release lever to stop movement and apply brakes. Lever is spring centered to the "off" position.

   Press and hold down the left side of the Steer Switch (located on the end of the Drive Control Lever) to turn steer wheels to the left. Press and hold down the right side to turn right.

   Release switch when desired steer angle is attained. Switch will return to the "off" position.

   Wheels will remain turned to the selected angle. Press and hold the switch in the opposite direction to straighten wheels or reverse direction.

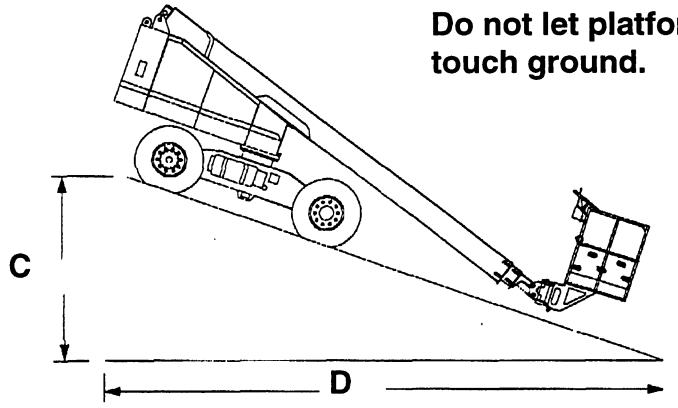
Operation

Things You Need to Know (Continued)

D. Traveling on Prepared Grades (Slopes) and Ramps

- The platform must be in the **fully lowered** position, and the boom must be **fully retracted** when traveling on grades (slopes) and ramps. (It may be necessary to raise the boom to prevent the platform from contacting the ground.)
- **Surface must be prepared** and the travel path **free from hazards** such as pot holes and bumps.
- Do not travel on grades or ramps that are **wet, muddy, slippery**, or have **poor traction**.
- **Do not turn** the aerial lift on grades or ramps.
- This machine is **limited in the grades it can safely travel.** Refer to "Gradability" in the "Specifications" Section, and do not exceed the figure listed (which is for a hard, dry surface), as the aerial lift **may become unstable and tip over**.
- When driving up or down a grade the platform should always be pointed down the slope (counterweight end pointed up slope) and with boom centered over the non-steering wheels.
- **Drive down slopes** in "SLOW" speed, and at a controlled rate (moving the drive lever to the center "off" position momentarily to allow the brakes to slow the aerial lift).

Do not let platform touch ground.



% Grade = C/D

A vertical rise of "C" feet (meters) over a horizontal distance of "D" feet (meters).

Operation

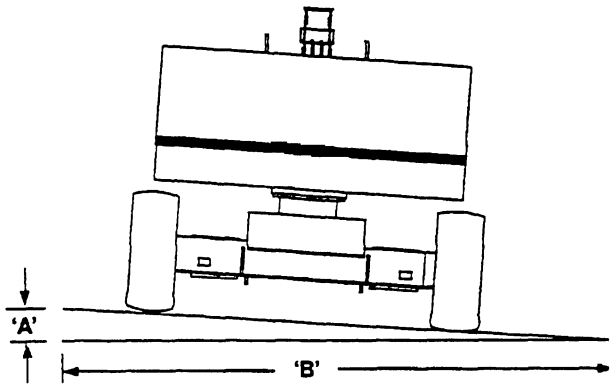
Things You Need to Know (Continued)

D. Traveling on Prepared Grades (Slopes) and Ramps (Continued)

- Do not drive on side slopes exceeding approximately 5° (9%) (hard, dry surface), as the aerial lift **may become unstable and tip over**.
- **Drive across slopes** in "SLOW" speed, and in a careful manner. **Do not turn** the aerial lift on a side slope.

% Grade = A/B

A vertical rise of "A" feet (meters) over a horizontal distance of "B" feet (meters).



E. Traveling at "Fast" Speed

- **Use extreme caution** when traveling at "fast" speed in this aerial lift.
- **Do not drive on any slope at a fast speed.**
- **Surface must be prepared** and the travel path **free from hazards** such as pot holes and bumps.
- **Do not** operate this aerial lift at "fast" speed if ground personnel are anywhere near the travel area.
- **Use extreme caution** when traveling at "fast" speed with the platform raised. Note that when the platform is raised above horizontal, only "slow" speed is available.

To travel at "fast" speed, select the "FAST" position with the Machine Functions Speed Switch located on the aerial control box.

Operation

Things You Need to Know (Continued)

F. Traveling in Reverse

⚠WARNING

WITH THE PLATFORM SWUNG OVER THE STEERING WHEELS, USE CAUTION WHEN SELECTING THE TRAVEL DIRECTION.

TRAVEL DIRECTION WILL BE OPPOSITE TO DRIVE CONTROL LEVER MOVEMENT.

- **Use extreme caution** when traveling in reverse with this aerial lift.
- **Surface must be prepared** and the travel path **free from hazards** such as potholes and bumps.
- **Do not** operate this aerial lift in reverse if ground personnel are anywhere near the travel area.
- **Use extreme caution** when traveling in reverse with the platform raised.

To travel in reverse, press the Foot Operated Switch. Pull the Drive Control Lever back in the "REVERSE" direction.

Operation

Things You Need to Know (Continued)

G. Steering Motion (Turning)

⚠WARNING

WITH THE PLATFORM SWUNG OVER THE STEERING WHEELS, USE CAUTION WHEN SELECTING STEERING DIRECTION.

STEER DIRECTION WILL BE OPPOSITE TO STEER SWITCH SELECTION.

- **Use extreme caution** when turning this aerial lift.
- **Surface must be prepared** and the travel path **free from hazards** such as potholes and bumps.
- **Never** make sharp or abrupt turns with platform raised.
- **Never** make turns on a grade or ramp.

To steer the aerial lift, press the Foot Operated Switch.

Press and hold down the left side of the Steer Switch (located on the end of the Drive Control Lever) to turn steer wheels to the left. Press and hold down the right side to turn right.

Release switch when desired steer angle is attained. Switch will return to the "off" position.

Wheels will remain turned to the selected angle. Press and hold the switch in the opposite direction to straighten wheels or reverse direction.

Operation

Things You Need to Know (Continued)

H. Raising or Lowering the Boom

What Do I Check?

1. Check clearances overhead and around the boom and platform before moving the boom "up".

2. Make sure that there are no personnel, materials or other obstacles below or around the boom and platform before moving the boom "down".

To move the boom "up" or "down" using the **aerial control box**, press the Foot Operated Switch. Push the Boom Lift/ Rotate Turret Lever forward to move the platform "up". Pull back to move the platform "down".

Moving the boom "up" or "down" using the **ground control station** should only be done during maintenance, or in an emergency situation if the aerial controls cannot be operated. To move the boom "up" or "down" using the **ground control station**, press and hold the Aerial/ Ground Selector Switch. Push the Boom Lift Toggle Switch "up" to raise the boom and "down" to lower the boom.

I. Extending or Retracting the Boom

What Do I Check?

1. Check clearances overhead and around the boom and platform before moving the boom "out".

2. Make sure that there are no personnel, materials or other obstacles around the boom and platform before moving the boom "in".

To move the boom "out" or "in" using the **aerial control box**, press the Foot Operated Switch. Push the Boom Extend/ Retract Lever back to move the boom "out". Pull forward to move the boom "in".

Operation

Things You Need to Know (Continued)

I. Extending or Retracting the Boom (Continued)

Moving the boom "out" or "in" using the **ground control station** should only be done during maintenance, or in an emergency situation if the aerial controls cannot be operated. To move the boom "out" or "in" using the **ground control station**, press and hold the Aerial/ Ground Selector Switch. Push the Boom Extend/ Retract Toggle Switch "left" to extend the boom and "right" to retract the boom.

J. Raising or Lowering the Jib Boom (TB66 only)

What Do I Check?

1. Check clearances overhead and around the boom and platform before moving the jib boom "up".

2. Make sure that there are no personnel, materials or other obstacles around the boom and platform before moving the jib boom "down".

To move the jib boom "up" or "down" using the **aerial control box**, press the Foot Operated Switch. Move the Jib Boom Up/ Down Toggle Switch "up" to raise the jib boom. Move the switch "down" to lower the jib boom..

Moving the jib boom "up" or "down" using the **ground control station** should only be done during maintenance, or in an emergency situation if the aerial controls cannot be operated. To move the jib boom "up" or "down" using the **ground control station**, press and hold the Aerial/ Ground Selector Switch. Move the Jib Boom Toggle Switch "up" to raise the jib boom and "down" to lower the jib boom.

Operation

Things You Need to Know (Continued)

K. Rotating the Turret

What Do I Check?

1. Check clearances around the aerial lift before rotating the turret "left" or "right".

2. Make sure that there are no personnel, materials or other obstacles around the aerial lift before moving the turret.

To move the turret "left" or "right" using the **aerial control box**, press the Foot Operated Switch. Push the Boom Lift/ Rotate Turret Lever left to move the turret "counterclockwise". Push the Boom Lift/ Rotate Turret Lever right to move the turret "clockwise".

Rotating the turret using the **ground control station** should only be done during maintenance, or in an emergency situation if the aerial controls cannot be operated. To move the turret "left" or "right" using the **ground control station**, press and hold the Aerial/ Ground Selector Switch. Move the Turret Rotate Toggle Switch "left" to move turret "counterclockwise" and "right" to move turret "clockwise".

L. Leveling the Platform

What Do I Check?

1. Check clearances around the platform before leveling the platform.

2. Make sure that there are no personnel, materials or other obstacles around the platform before leveling the platform.

To level the platformusing the **aerial control box**, press the Foot Operated Switch. Push the Platform Tilt Forward Toggle Switch "up" to move the platform toward the boom. Push the Platform Tilt Back Toggle Switch "down" to move the platform away from the boom.

Operation

Things You Need to Know (Continued)

L. Leveling the Platform (Continued)

Leveling the platform using the **ground control station** should only be done during maintenance, or in an emergency situation if the aerial controls cannot be operated. To level the platform using the **ground control station**, press and hold the Aerial/ Ground Selector Switch. Move the Platform Tilt Toggle Switch "up" to move platform toward the boom and "down" to move platform away from the boom.

M. Rotating the Platform

What Do I Check?

1. Check clearances around the aerial lift before rotating the superstructure "left" or "right".

2. Make sure that there are no personnel, materials or other obstacles around the platform before rotating the platform.

To move the platform "left" or "right" using the **aerial control box**, press the Foot Operated Switch. Move the Platform Rotation Toggle Switch left to move the platform "clockwise". Move the Platform Rotation Toggle Switchright to move the platform "counterclockwise". Speed of rotation is selected by the Slow/ Fast Selector Knob next to the Platform Rotation Toggle Switch.

Rotating the platform using the **ground control station** should only be done during maintenance, or in an emergency situation if the aerial controls cannot be operated. To rotate the platform using the **ground control station**, press and hold the Aerial/ Ground Selector Switch. Move the Platform Rotation Toggle Switch "left" to move platform "clockwise" and "right" to move platform "counterclockwise".

Operation

Shut-Down Procedures

- When finished with the aerial lift, place the platform in the "fully down" position.
- Park the aerial lift on a level surface (preferably protected from weather). Secure to prevent vandalism and to discourage children from climbing or playing on it.
- Turn off the Emergency pump, Off/ On/ Start Switch.
- Exit the platform.
- Remove the key to prevent unauthorized operation.

Unloading

Section 7

Unloading

How Can the Aerial Lift Be Unloaded?

A. **Unloading the Aerial Lift Under Its Own Power**
B. **Unloading the Aerial Lift NOT Under Its Own Power**
C. **Unloading the Aerial Lift with a Crane**

⚠WARNING

DO NOT STAND ON AERIAL LIFT WHILE UNLOADING BY ANY OF THESE PROCEDURES.

Unloading the Aerial Lift Under Its Own Power

⚠WARNING

ONLY TRAINED OPERATORS EXPERIENCED WITH THIS AERIAL LIFT'S CONTROLS ARE TO UNLOAD THE AERIAL LIFT.

1. Visually inspect aerial lift for any sign of damage, leaks or loose wires. If any problems are found, repairs must be made before unloading.

2. If unloading ramps are being used, select ramps of **adequate capacity** to support the weight of the aerial lift (see the "Specifications" Section of this manual).

   Ramps should be wide enough to allow plenty of **side clearance** beyond the wheels (see "Specifications" Section of this manual).

   Ramp **angle must not exceed** 14° (25%).

Unloading

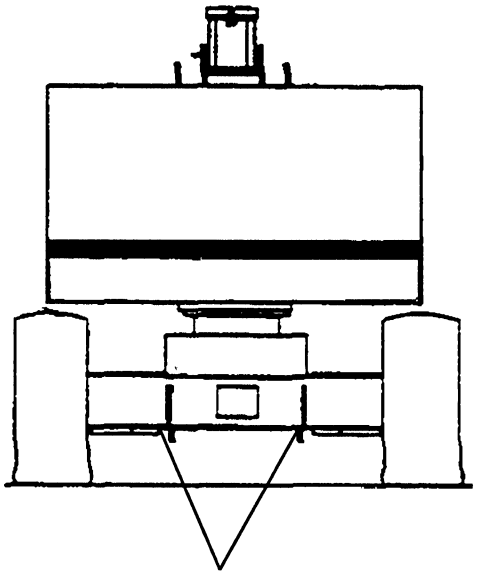
Unloading the Aerial Lift Under Its Own Power (Continued)

3. It is suggested that the aerial lift be attached to a winch for the unloading procedure. Attach thewinch cable to the loops provided for this purpose on the front of the base. (see illustrations below). Using a winch will assure greater safety in unloading the aerial lift and limit the speed that it can descend the ramp.

   NOTE: If the angle of the ramp exceeds 14° (25%), a winch **must** be used to unload the aerial lift.

4. Make sure the **winch cable** is properly attached to the aerial lift. Remove all tie downs and wheel chocks.

   NOTE: If unloading from a "roll back" or "tilt back" truck, make sure the winch cable is properly attached and that all slack is out of the cable before raising the truck bed.



Attach Winch Cable to Loops

Unloading

Unloading the Aerial Lift Under Its Own Power (Continued)

NOTE: When going up or down a grade the platform should always be pointed down the slope (counterweight end facing up slope) and with the boom centered over the non-steering wheels. Descend the slope in "increments". Allow the brakes to apply completely before once again operating the DRIVE/ STEER CONTROL LEVER. Do not permit the aerial lift to "free-wheel" (uncontrolled acceleration) down any grade.

5. Ensure the AERIAL/ GROUND Selector Switch is in the "AERIAL" position. Ensure Emergency Stop Switch is reset.

6. Enter the platform, secure the safety gate and attach the fall protection gear. Ensure Emergency Stop Switch is reset.

7. Start the engine.

8. **Select** "SLOW" drive speed.

9. Straighten the wheels to allow direct travel down ramp.

   NOTE: Platform and jib boom (on TB66) may need to be raised to allow for greater ground clearance.

10. Ensure the unloading aera is clear of personnel, debris and any other hazards.

11. **Carefully** drive the aerial lift off the truck or trailer with the **assistance of the winch**, if used. Drive at a controlled rate, moving the drive lever to the center "off" position momentarily to allow the brakes to slow the aerial lift. Keep the drive function engaged while winching, to avoid damaging the aerial lift.

12. When the aerial lift has been unloaded to level ground, shut down the aerial lift.

13. Remove the winch cable before attempting to move the aerial lift.

Unloading

Unloading the Aerial Lift NOT Under Its Own Power

⚠WARNING

DO NOT STAND ON AERIAL LIFT WHILE UNLOADING BY ANY OF THESE PROCEDURES.

1. Visually inspect aerial lift for any sign of damage, leaks or loose wires. If any problems are found, repairs must be made before unloading.

2. If unloading ramps are being used, select ramps of **adequate capacity** to support the weight of the aerial lift (see the "Specifications" Section of this manual).

   Ramps should be wide enough to allow plenty of **side clearance** beyond the wheels (see "Specifications" Section).

   Ramp **angle must not exceed** 14° (25%).

3. Position the ramps so that they are in line with the centerline of the aerial lift to ensure the aerial lift will **not run off the side** of the ramp.

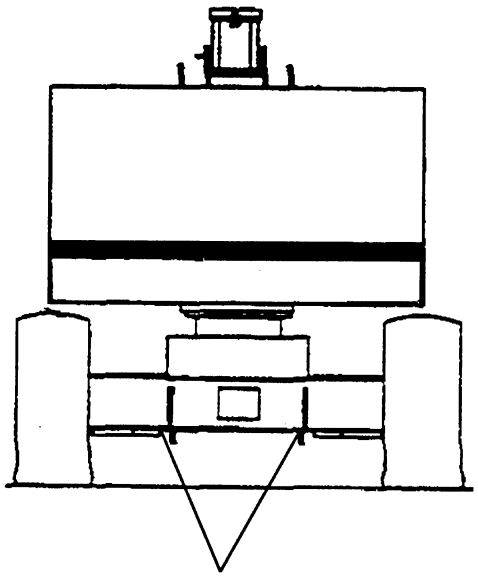
4. Make sure steering wheels are positioned so that the aerial lift travels in a **straight line** down the ramp.

   NOTE: To operate steering, use Emergency Pump and Steer Toggle Switch on Platform Controls. Refer to "Emergency Operation From Platform Controls if Platform Controls are Inoperable" instructions in the "Before Operation Checks" Section.

Unloading

Unloading the Aerial Lift NOT Under Its Own Power (Continued)

5. Make sure the **winch cable** is properly attached to the aerial lift.



Attach Winch Cable to Loops

NOTE: If unloading from a "roll back" or "tilt back" truck, make sure the winch cable is properly attached and that all slack is out of the cable before raising the truck bed.

6. **No personnel** are to be in or around the aerial lift.

7. Disengage the "non-steering axle" torque hubs (steering axle torque hubs can remain engaged).

NOTE: Make sure the aerial lift is on a **level surface** with the **wheels blocked** (front and back) before disengaging the torque hubs.

Unloading

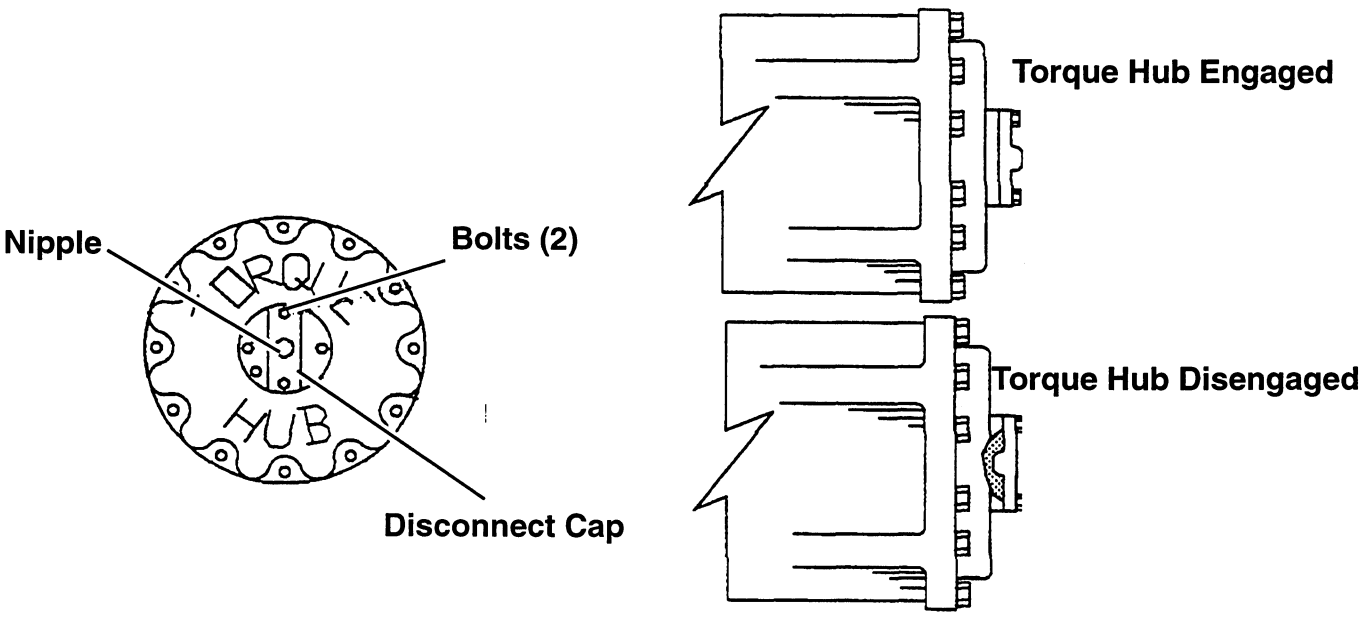
Unloading the Aerial Lift NOT Under Its Own Power (Continued)

⚠WARNING

THE BRAKES OF THE AERIAL LIFT WILL BE DISABLED WITH THE TORQUE HUBS DISENGAGED. USE EXTREME CAUTION WHEN TORQUE HUBS ARE DISENGAGED.

a. To disengage the torque hub:

- Remove the two (2) bolts securing the disconnect cap onto the torque hubs.
- Turn the cap over and insert back into the torque hub so that the raised "nipple" on the cap depresses the "plunger" located beneath it.
- Reinstall the disconnect cap and bolts.



Unloading

Unloading the Aerial Lift NOT Under Its Own Power (Continued)

5. Remove all tie downs and wheel chocks.

6. Ensure the AERIAL/ GROUND Selector Switch is in the "AERIAL" position. Ensure Emergency Stop Switch is reset.

7. Enter the platform, secure the safety gate and attach the fall protection gear. Ensure Emergency Stop Switch is reset.

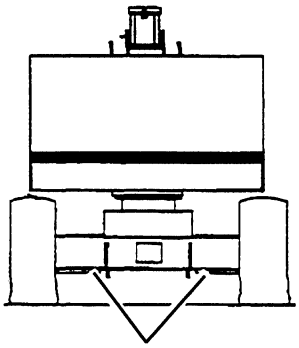
8. Straighten out the steering wheels.

   NOTE: Platform and jib boom (on TB66) may need to be raised to allow for greater ground clearance.

9. Exit the platform and unload the aerial Lift. **Do not stand in the platform when unloading the aerial lift not under it's own power.**

10. The boom can be raised and/ or lowered as needed to prevent the bottom of the platform form contacting the ground, ramps or truck. Raise or lower the boom from the ground control station only, **stop the winch** before performing this task.

    NOTE: To operateboom and / or jib boom (TB66), use Emergency Pump and appropriate toggle switch at Ground Controls. Refer to "Emergency Operation From Ground Controls if Platform Controls are Inoperable" instructions in the "Before Operation Checks" Section.



Attach Winch Cable to Loops

Unloading

Unloading the Aerial Lift NOT Under Its Own Power (Continued)

11. When the aerial lift has been unloaded to level ground, block the wheels and engage the torque hub before disconnecting the winch cable or attempting to move the aerial lift.

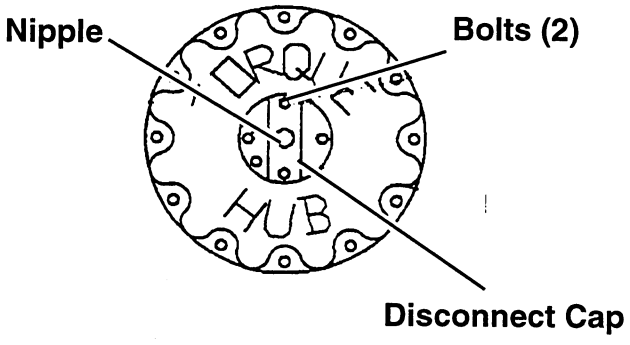
    To re-engage the torque hubs:

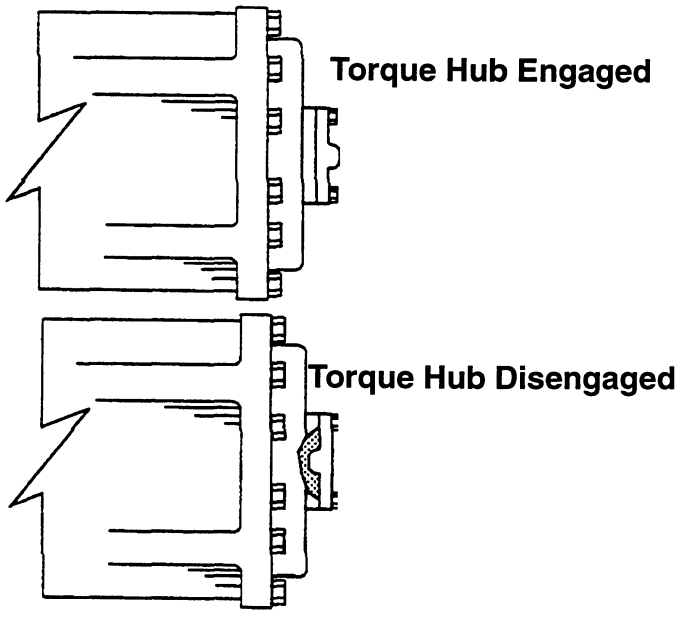
    a. Remove the two (2) bolts fastening the disconnet cap to the torque hub.

    b. **Rock the wheel** until the plunger in the center of the torque hub "pops" back out. **Do not operate the drive function** until the torque hubs are properly engaged.

    c. Turn the disconnect cap back over so that the nipple is pointed away from the face of the torque hub.

    d. Reinstall the cap back over the plinger, install the two (2) bolts and torque to approximately 84 inch pounds.

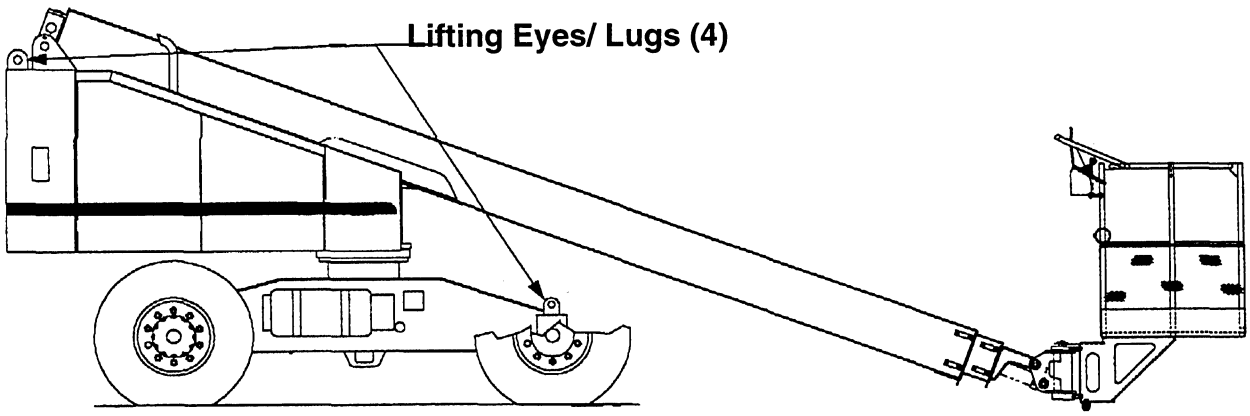




Unloading

Lifting With Crane

1. **Verify weight** of aerial lift, this information can be found in the Specification Section of this manual and on the identification plate on the base of the aerial lift.
2. **Use crane of correct capacity** for weight of aerial lift and radius to be lifted.
3. **Use** rigging equipment capable of lifting the weight and designed to accommodate the geometry of the aerial lift.
4. **Ensure** all personnel are clear of the aerial lift and the surrounding area.
5. **Lift the aerial lift** carefully andplace it slowly on the ground.
6. **Remove all rigging equipment** before moving aerial lift.



Loading

Section 8

Loading

How Can the Aerial Lift Be Loaded?

A. **Loading the Aerial Lift Under Its Own Power**
B. **Loading the Aerial Lift NOT Under Its Own Power**
C. **Loading the Aerial Lift with a Crane**

⚠WARNING

DO NOT STAND ON AERIAL LIFT WHILE LOADING BY ANY OF THESE PROCEDURES.

Loading the Aerial Lift Under Its Own Power

⚠WARNING

ONLY TRAINED OPERATORS EXPERIENCED WITH THIS AERIAL LIFT'S CONTROLS ARE TO LOAD THE AERIAL LIFT.

1. Visually inspect aerial lift for any sign of damage, leaks or loose wires. If any problems are found, repairs must be made before loading.

2. If loading ramps are being used, select ramps of **adequate capacity** to support the weight of the aerial lift (see the "Specifications" Section of this manual).

   Ramps should be wide enough to allow plenty of **side clearance** beyond the wheels (see "Specifications" Section of this manual).

   Ramp **angle must not exceed** 14° (25%).

Loading

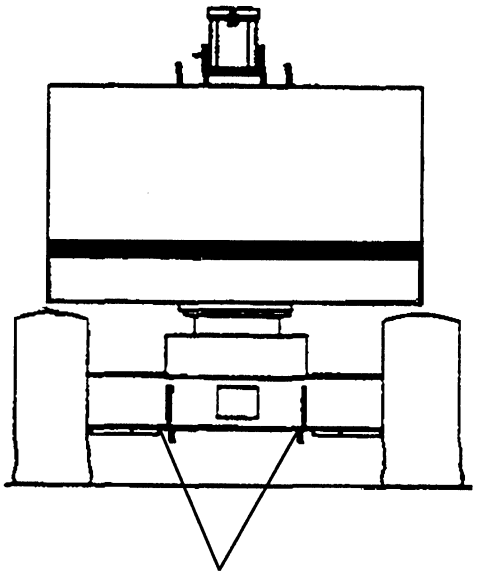
Loading the Aerial Lift Under Its Own Power (Continued)

3. It is suggested that the aerial lift be attached to a winch for the loading procedure. Attach thewinch cable to the loops provided for this purpose on the front of the base. (see illustrations below). Using a winch will assure greater safety in loading the aerial lift.

   NOTE: If the angle of the ramp exceeds 14° (25%), a winch **must** be used to load the aerial lift.

4. Make sure the **winch cable** is properly attached to the aerial lift. Remove all tie downs and wheel chocks.

   NOTE: If loading from a "roll back" or "tilt back" truck, make sure the winch cable is properly attached and that all slack is out of the cable before raising the truck bed.



Attach Winch Cable to Loops

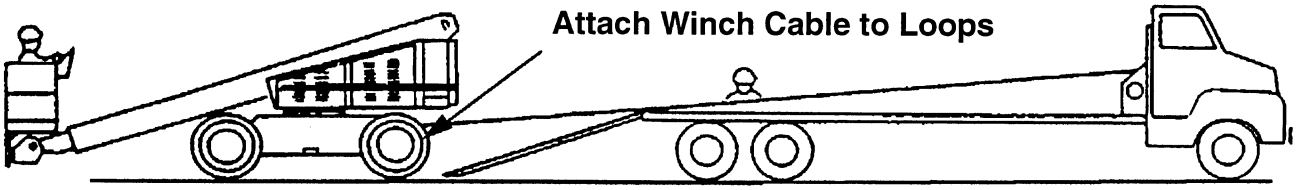
Loading

Loading the Aerial Lift Under Its Own Power (Continued)

5. Position ramp or truck bed so that the centerline is in line with the centerline of the aerial lift to ensure the aerial lift will not run off side of ramp.

6. Position the aerial lift at the bottom of the ramp(s) directly behind the bed of the truck with the steering wheels touching the ramp(s) and the platform pointed away from the truck.

   NOTE: When going up or down a grade the platform should always be pointed down the slope (counterweight end facing up slope) and with the boom centered over the non-steering wheels.



7. Ensure the AERIAL/ GROUND Selector Switch is in the "AERIAL" position. Ensure Emergency Stop Switch is reset.

8. Enter the platform, secure the safety gate and attach the fall protection gear. Ensure Emergency Stop Switch is reset.

9. Start the engine.

8. **Select** "SLOW" drive speed.

Loading

Loading the Aerial Lift Under Its Own Power (Continued)

9. **Straighten the wheels** to allow direct travel up the ramp.

10. Ensure the unloading aera is clear of personnel, debris and any other hazards.

11. **Carefully** drive the aerial lift up the ramp onto the truck or trailer with the **assistance of the winch**. Drive at a controlled rate, keeping all slack out of the winch cable. Keep the drive function engaged while winching, to avoid damaging the aerial lift.

    NOTE: Platform and jib boom (on TB66) may need to be raised to allow for greater ground clearance.

12. When the aerial lift is on the truck or trailer and the aerial lift's weight is properly distributed on the truck's axles, the aerial lift is ready to be tied down.

13. **Turn off the engine and push "in" the EMERGENCY STOP SWITCH** at both the aerial and ground control stations. Ensure the OFF/ ON/ START key switch is "off" at the ground station.

14. **Remove the winch cable.**

15. **Tie down** the aerial lift as shown later in this section.

Loading

Loading the Aerial Lift NOT Under Its Own Power

⚠WARNING

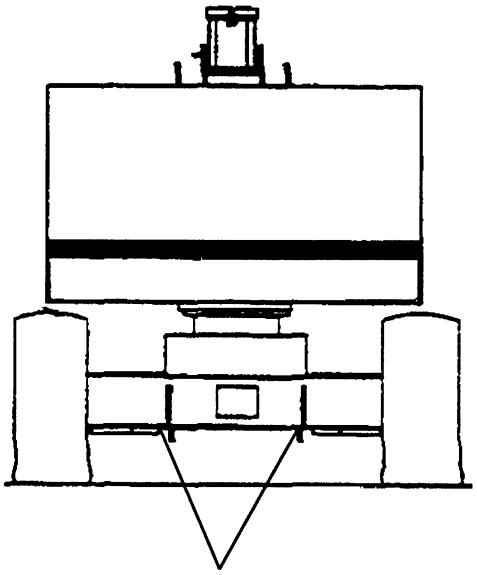
DO NOT STAND ON AERIAL LIFT WHILE LOADING BY ANY OF THESE PROCEDURES.

1. Visually inspect aerial lift for any sign of damage, leaks or loose wires. If any problems are found, repairs must be made before loading.

2. If loading ramps are being used, select ramps of **adequate capacity** to support the weight of the aerial lift (see the "Specifications" Section of this manual).

   Ramps should be wide enough to allow plenty of **side clearance** beyond the wheels (see "Specifications" Section).

   Ramp **angle must not exceed** 14° (25%).



Attach Winch Cable to Loops

Loading

Loading the Aerial Lift NOT Under Its Own Power (Continued)

3. Position the ramps so that they are in line with the centerline of the aerial lift to ensure the aerial lift will **not run off the side** of the ramp.

4. Make sure steering wheels are positioned so that the aerial lift travels in a **straight line** up the ramp.

   NOTE: To operate steering, use Emergency Pump and Steer Toggle Switch on Platform Controls. Refer to "Emergency Operation From Platform Controls if Platform Controls are Inoperable" instructions in the "Before Operation Checks" Section.

5. Make sure the **winch cable** is properly attached to the aerial lift.

   NOTE: If loading from a "roll back" or "tilt back" truck, make sure the winch cable is properly attached and that all slack is out of the cable before raising the truck bed.

6. **No personnel** are to be in or around the aerial lift.

7. Disengage the "non-steering axle" torque hubs (steering axle torque hubs can remain engaged).

   NOTE: Make sure the aerial lift is on a **level surface** with the **wheels blocked** (front and back) before disengaging the torque hubs.

Loading

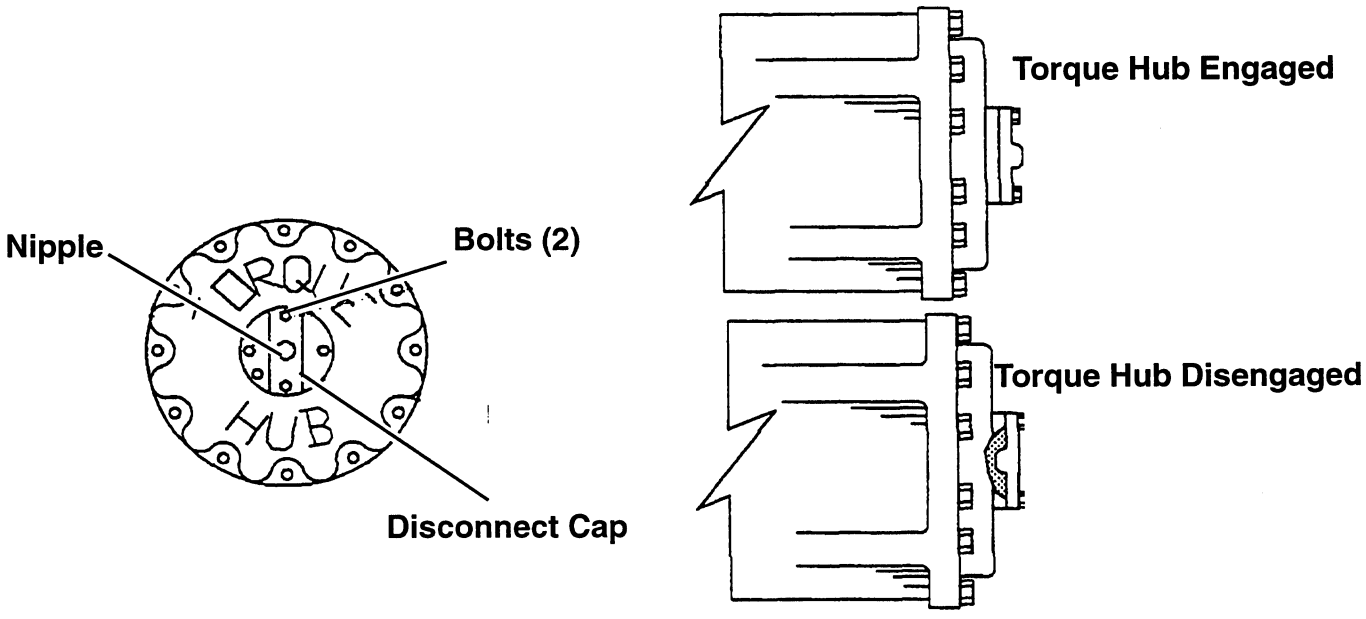
Loading the Aerial Lift NOT Under Its Own Power (Continued)

⚠WARNING

THE BRAKES OF THE AERIAL LIFT WILL BE DISABLED WITH THE TORQUE HUBS DISENGAGED. USE EXTREME CAUTION WHEN TORQUE HUBS ARE DISENGAGED.

a. To disengage the torque hub:

- Remove the two (2) bolts securing the disconnect cap onto the torque hubs.
- Turn the cap over and insert back into the torque hub so that the raised "nipple" on the cap depresses the "plunger" located beneath it.
- Reinstall the disconnect cap and bolts.



Loading

Loading the Aerial Lift NOT Under Its Own Power (Continued)

5. Remove all wheel chocks.

6. Ensure the AERIAL/ GROUND Selector Switch is in the "AERIAL" position. Ensure Emergency Stop Switch is reset.

7. Enter the platform, secure the safety gate and attach the fall protection gear. Ensure Emergency Stop Switch is reset and turn EMERGENCY PUMP, OFF/ ON/ STARTSwitch is "on".

8. Step on FOOT OPERATED SWITCH and use the DRIVE/ STEER CONTROL LEVER to straighten out the steering wheels.

   NOTE: Platform and jib boom (on TB66) may need to be raised to allow for greater ground clearance.

9. Exit the platform and load the aerial Lift. **Do not stand in the platform when loading the aerial lift not under it's own power.**

10. The boom can be raised and/ or lowered as needed to prevent the bottom of the platform form contacting the ground, ramps or truck. Raise or lower the boom from the ground control station only, **stop the winch** before performing this task.

    NOTE: To operateboom and / or jib boom (TB66), use Emergency Pump and appropriate toggle switch at Ground Controls. Refer to "Emergency Operation From Ground Controls if Platform Controls are Inoperable" instructions in the "Before Operation Checks" Section.

Loading

Loading the Aerial Lift NOT Under Its Own Power (Continued)

11. When the aerial lift is on the truck and it's weight is properly distributed on the truck's axles, turn the EMERGENCY PUMP, OFF/ ON/ START SWITCH to "off" and push "in" the EMERGENCY STOP SWITCH at both control stations.

12. **The torque hubs must be re-engaged** before the aerial lift is tied down.

    To re-engage the torque hubs:

    a. Remove the two (2) bolts fastening the disconnet cap to the torque hub.

    b. **Rock the wheel** until the plunger in the center of the torque hub "pops" back out. **Do not operate the drive function** until the torque hubs are properly engaged.

    c. Turn the disconnect cap back over so that the nipple is pointed away from the face of the torque hub.

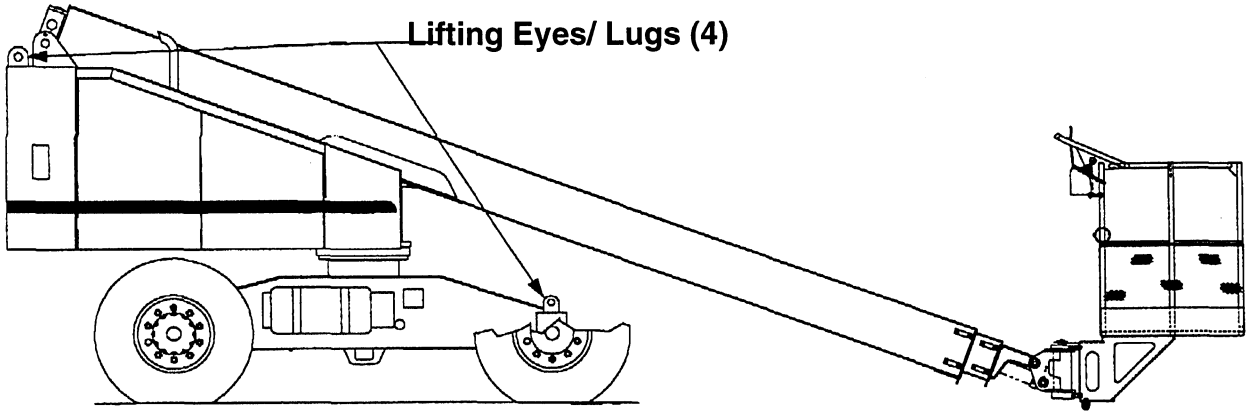
    d. Reinstall the cap back over the plinger, install the two (2) bolts and torque to approximately 84 inch pounds.

13. **Tie down** the aerial lift as shown later in this section.

Loading

Lifting With Crane

1. **Verify weight** of aerial lift, this information can be found in the Specification Section of this manual and on the identification plate on the base of the aerial lift.
2. **Use crane of correct capacity** for weight of aerial lift and radius to be lifted.
3. **Use** rigging equipment capable of lifting the weight and designed to accommodate the geometry of the aerial lift.
4. **Ensure** all personnel are clear of the aerial lift and the surrounding area.
5. **Lift the aerial lift** carefully andplace it slowly on the ground.
6. **Remove all rigging equipment** before moving aerial lift.



Loading

How Do I Tie Down The Aerial Lift?

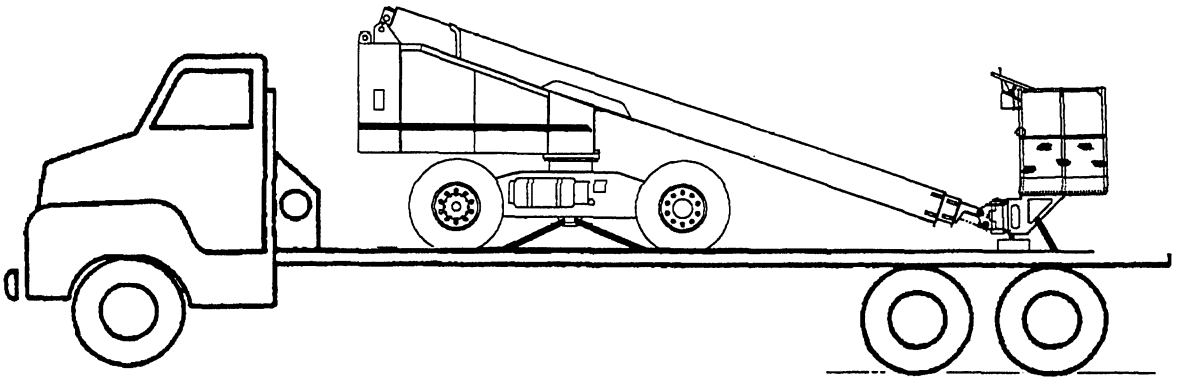
1. Select chains strong enough to restrain the aerial lift during travel.

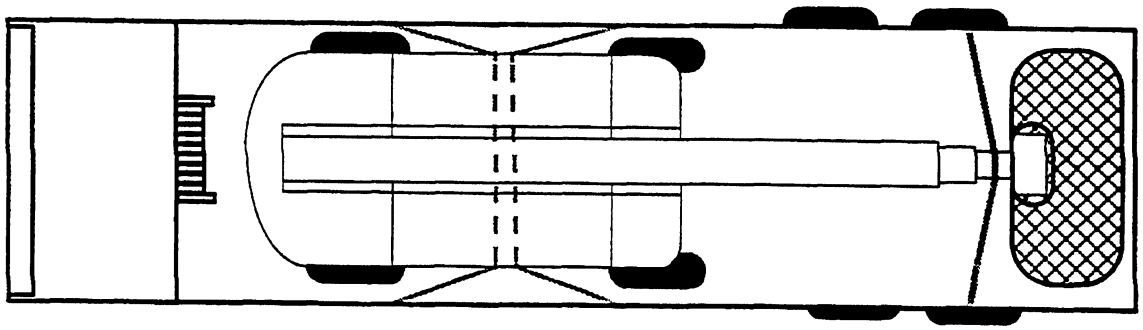
2. Lower the boom fully. Do not place the platform down on the bed of the vehicle.

3. Attach the chains through the two (2) tie down loops on the sides of the aerial lift and "snug" them with chain binders or come-alongs.

4. Place a strap or other suitable restraint (protect the boom if chains are used) across the top of the platform rotator or boom (DO NOT pass through or across platform) and "snug" with chain binder or come-along.

5. The tie down chains must be attached as illustrated below and on decals on base of aerial lift. Restraining the aerial lift in locations other than the approved locations could cause serious damage to the aerial lift.





Maintenance

Section 9

Maintenance

Introduction

⚠WARNING

THIS AERIAL LIFT HAS A SEPARATE MAINTENANCE MANUAL.

DO NOT ATTEMPT ANY MAINTENANCE REPAIRS OR TROUBLE-SHOOTING WITHOUT FIRST CONSULTING THE MAINTENANCE MANUAL.

SHOULD YOU EXPERIENCE ERRATIC OPERATION OR NOTICE ANY MALFUNCTION WHILE RUNNING YOUR AERIAL LIFT, CONTINUE OPERATION ONLY LONG ENOUGH TO RETURN TO THE GROUND POSITION IF POSSIBLE.

IMMEDIATELY REPORT THE INCIDENT TO YOUR SUPERVISOR, AND DISCONTINUE USING THE AERIAL LIFT UNTIL IT HAS BEEN CHECKED BY A TRAINED, QUALIFIED MECHANIC.

In addition to the "Before Operation Checks" descibed in Section 5, a regular program of periodic preventive maintenance is absolutely essential to prolonging the life of the aerial lift, maximizing efficient service and minimizing downtime. This section details a series of check and procedures which are performed at daily, weekly, monthly and semi-annual intervals.

Even if the operator is not directly responsible for maintenance of the aerial lift, he should perform daily, all of the inspections listed in the "Before Operation Check", in Section 5 of the "Operator's Manual".

> **NOTE:** Report and repair all deficiencies noted during the "Before Operation Check". The operator should be assured that the aerial lift has been properly maintained and inspected before operating it.

Maintenance

Maintenance Schedule

The maintenance checks prescribed for longer intervals include those required for the shorter intervals. Thus, the weekly check includes all items in the daily check, the monthly check includes all items in the weekly and daily checks and so on through the semi-annual check, which includes the quarterly, monthly, weekly and daily checks.

The maintenance schedule provided serves as a guide to assure that the minimum basic preventive maintenance requirements will be met under average operating conditions. Condition which impose greater wear, loads or strain on the aerial lift may dictate reducing the interval between these checks. Before altering the recommended maintenance schedule, re-evaluate the aerial lift's operation and review the owner's inspection records. Consider all factors involved and develop a revised schedule adequate to meet routine maintenance requirements.

Refer to the engine manufacturer's manual for engine maintenance requirements. Should any decrepancy occur relative to the maintenance schedule provided in this manual and those provided by the engine manufacturer, the engine manufacturer's recommendations take precedence over those in this manual.

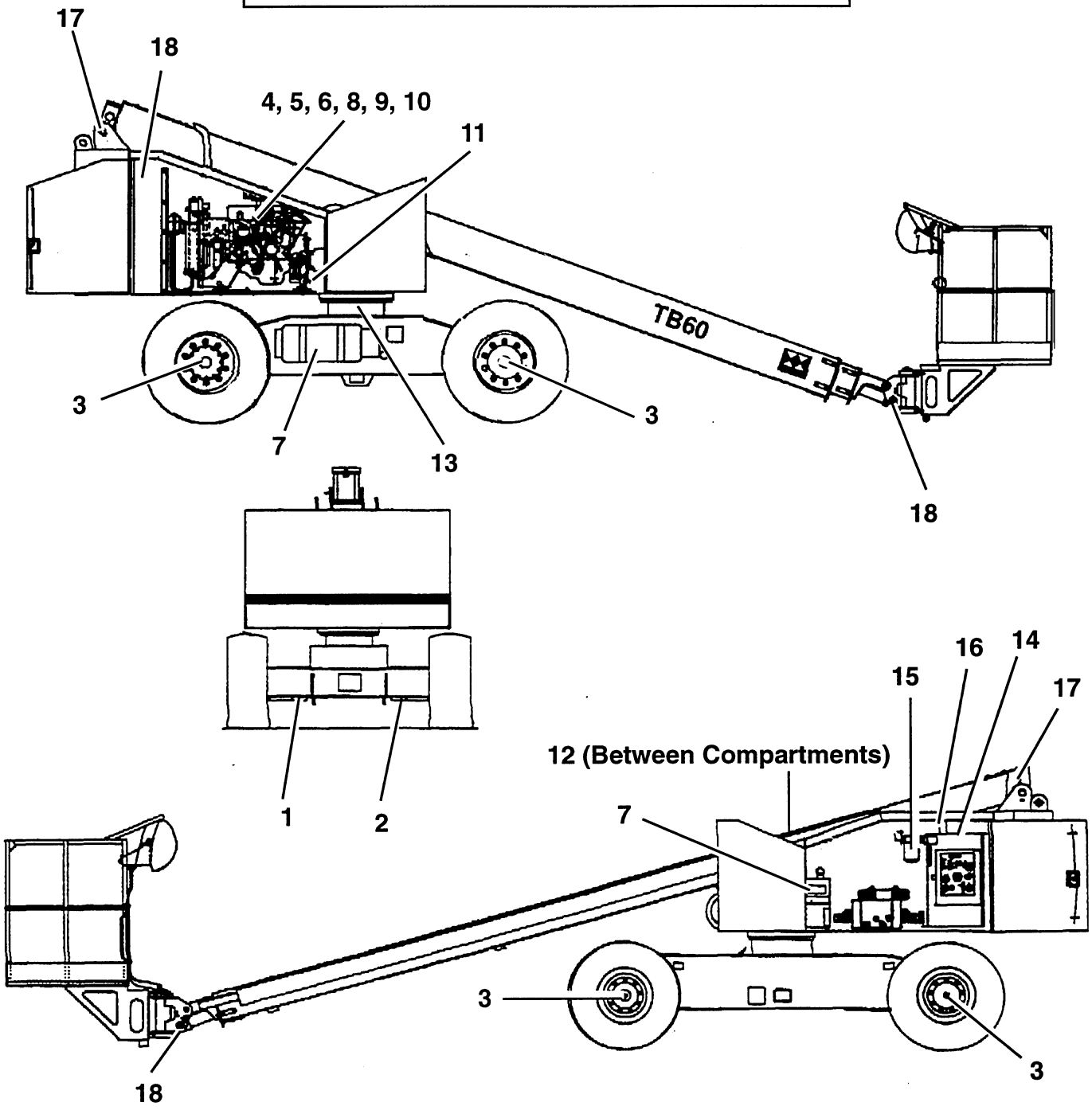
Owner's Inspection Record

Periodic maintenance of the aerial lift is the responsibility of the owner. The "Aerial Lift Inspection Report" found in the manual packet is to be used for recording the date of each inspection, person(s) performing the inspection, any deficiencies found and corective action.

This record also serves as a tool toward detecting problem areas and re-analyzing maintenance requirements.

Maintenance

Maintenance Diagram



Maintenance

Recommended Maintenance and Service Schedule

ITEM	ITEM DESCRIPTION	LUBRICANT	SERVICE/ FREQUENCY
1	Tie Rod Pins (both sides)	Mobilcote Type - S	Lubricate Monthly
2	Steering Yoke King Pins (4 places)	Mobilcote Type - S	Lubricate Monthly
3	Torque Hubs (4 places)	Gear Oil -SAE EP 90	Check Monthly Replace Yearly
4	Engine	Refer to Mfgs. Instructions	See Mfgs. Instructions
5	Engine Oil Level	Refer to Mfgs. Instructions for Type	Check Daily
6	Radiator (if applicable)	Refer to Mfgs. Instructions	Check Daily
7	Fuel Tank (s)		Check/ Fill Daily
8	Air Filter		Inspect Weekly or as Conditions Dictate
9	Fuel Filter		Replace 100 Hours
10	Engine Oil Filter		See Mfgs. Instructions
11	Battery		Check Weekly
12	Rotation Gear Box	Gear Oil - SAE EP 90	Check Monthly
13	Ring Gear - (Bearing Race)	Multi-Purpose Grease EP-2 (rotate while greasing)	Lubricate Monthly
14	Hydraulic Reservoir Fluid	Northland Talamar Extreme	Check Daily Replace Yearly
15	Hydraulic Return Line Filter		Replace 100 Hours
16	Hydraulic Tank Strainer		Clean Yearly
17	Boom Pivot Pin	Mobilcote Type - S	Lubricate Monthly
18	Boom Lift & Platform Pivot Pins	Mobilcote Type - S	Lubricate Monthly
19	Check Cable Tension		At Engine Check Service or Monthly

Check each of the above items for security, loose or missing fasteners, leaks, wear or evidence of cracks. **Check** all visible electric wiring and hydraulic hoses for cracking or "checking", loose connections, fraying, chafing or excessive wear. If a problem is found with any of the following items, **do not operate** the aerial lift until a qualified aerial lift technician makes the necessary repairs.

Maintenance

Hydraulic Fluid

Different hydraulic fluid suppliers use various additives which, when mixed together, may cause problems in a hydraulic system.

This situation is rare, but can cause sludge, which can plug filters or acid, which can etch machined surfaces in hydraulic components or deteriorate seals. Any of the above conditions can result in the voiding of the warranty for these components.

Knowing this, if you still choose to add hydraulic fluid different from that initially supplied ("NORTHLAND TALAMAR EXTREME"), stay with a single brand as this will minimize the possibility of problems.

⚠ CAUTION

Any hydraulic fluid used in the hydraulic system of this aerial lift must meet or exceed the specifications of the fluid initially supplied.

At the next complete hydraulic fluid change, the fluid may be switched to your preferred brand.

⚠WARNING

HYDRAULIC FLUID UNDER PRESSURE IS HOT, CAN PENETRATE AND BURN THE SKIN, DAMAGE EYES, AND MAY CAUSE SERIOUS INJURY, BLINDNESS, AND EVEN DEATH. CORRECT LEAKS IMMEDIATELY.

FLUID LEAKS UNDER PRESSURE MAY NOT ALWAYS BE VISIBLE.

IF A MINERAL-BASED HYDRAULIC FLUID HAS PENETRATED THE SKIN, IT MUST BE MEDICALLY TREATED, WITHIN A FEW HOURS, BY A DOCTOR FAMILIAR WITH THIS TYPE OF INJURY.

ALWAYS CLEAN UP FUEL, HYDRAULIC FLUIDS AND LUBRICATING OILS SPILLED ON THE MACHINE. SPILLS CAN CAUSE FALLS, AND ARE A SERIOUS FIRE HAZARD.

Maintenance

Hydraulic Fluid Level Check

Check the hydraulic fluid level on a daily basis. The fluid level is checked using sight guage on the hydraulic tank. The fluid level must be between the "FULL" and "LOW" marks on the sight guage when the platform is in the fully down position.

Add fluid as needed through the filler cap opening. The hydraulic system was filled at the factory with "NORTHLAND TALAMAR EXTREME".

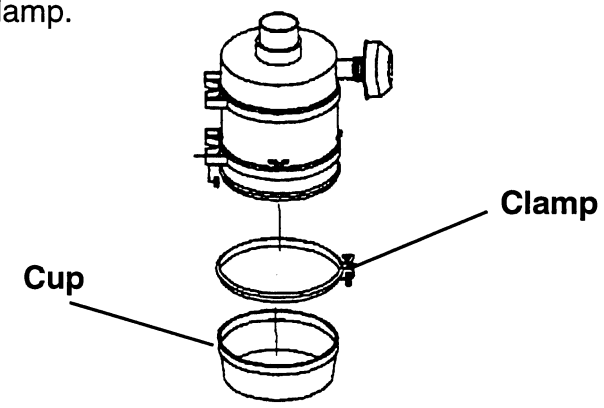
⚠ CAUTION

Any hydraulic fluid used in the hydraulic system of this aerial lift must meet or exceed the specifications of the fluid initially supplied.

Air Cleaner

The air cleaner should be checked and cleaned on a weekly basis. To clean the air cleaner:

- Loosen the clamp securing the cup to the air cleaner.
- Remove the cup and clean out any dirt or foreign matter in the cup.
- Reinstall the cup and tighten the clamp.



Maintenance

Coolant Level

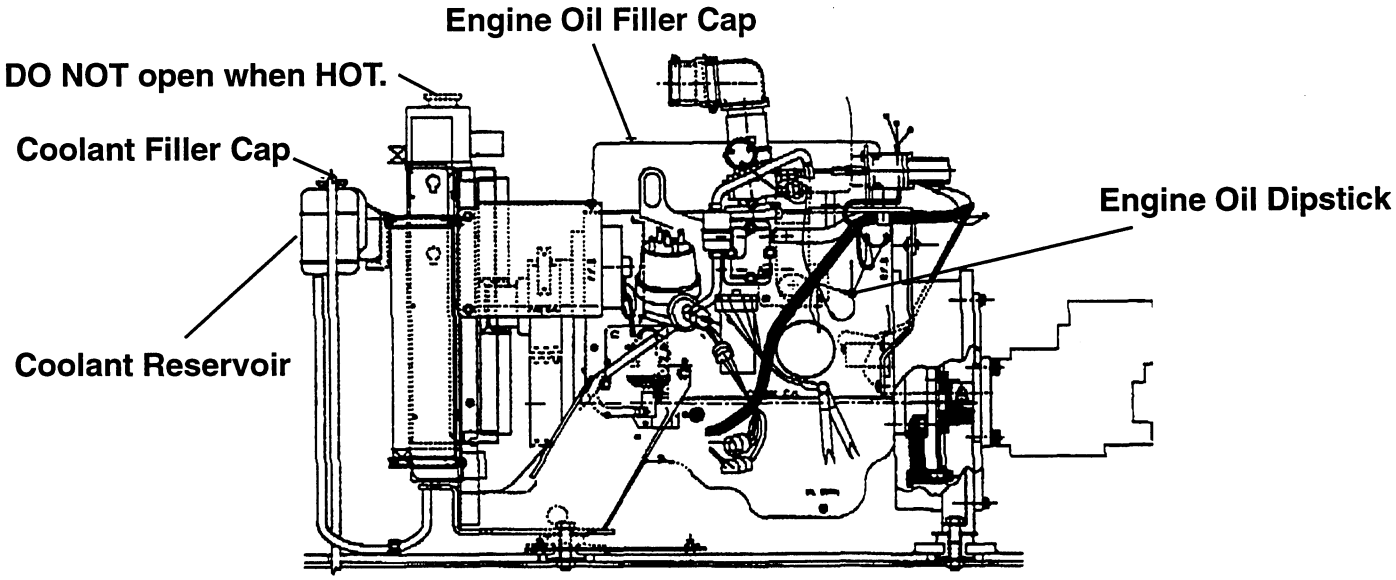
The coolant level must be checked daily. The coolant level is checked at the coolant reservoir. Ensure that the coolant level is between the Full and Low marks on the coolant reservoir while the engine is cool. If the coolant level is near or below the Low mark, add equal amounts of antifreeze and water until the level is at the Full mark. Do not add alchohol or methanol antifreeze. Refer to the engine manufacturers manual for additional information.

⚠ CAUTION

Do not open hot radiator. Allow radiator to cool if engine has been operated recently.

Engine Oil

Check the engine oil level on a daily basis. The oil level must be within the "SAFE" level on the engine oil dipstick. Add oil as needed in the filler cap on top of the engine. Refer to the engine manufacturer's manual for the recommended type oil.



Maintenance

Battery

⚠WARNING

TO AVOID SERIOUS BURNS, EXTREME CARE SHOULD BE USED WHEN HANDLING OR WORKING NEAR BATTERIES.

Avoid Battery Hazards

- **Batteries produce flammable and explosive gasses.** Keep electric arcs, sparks, flames and lit cigarettes (pipes, cigars, etc.) away from batteries.
- **Battery acid will damage eyes or skin on contact.** Always wear a face shield during battery maintenance to avoid getting acid in eyes. Always wear rubber gloves and protective clothing to keep acid off skin.
- **Never check the battery by placing a metal object across the posts.** Serious burns or an explosion can result.

Checking the Battery Electrolyte Level

- Check the colored "eye" in the top of the battery, a green color indicates that battery electrolyte level in okay.

Water or Acid Loss to Batteries

- Water loss from the battery occurs mainly as the result of evaporation brought on by temperature rises during charging. A Small amount may be lost due to gasses formed during charging. Electrolyte may be lost if the case becomes cracked or the battery tips over. Therefore, electrolyte is seldom needed.

Checking the Electrolyte (Battery Water) Level "Physically"

- When checking the electrolyte level, don't allow dirt to enter into the battery cells once thecaps have been removed. Take particular care to avoid setting the battery-cell caps down on a dirty surface. Replace the caps immediately after checking the level.

Maintenance

Battery (Continued)

⚠WARNING

TO AVOID SERIOUS BURNS, EXTREME CARE SHOULD BE USED WHEN HANDLING OR WORKING NEAR BATTERIES.

Filling the Battery

Materials and equipment required:

1. Battery Filler Bottle
2. Distilled Water

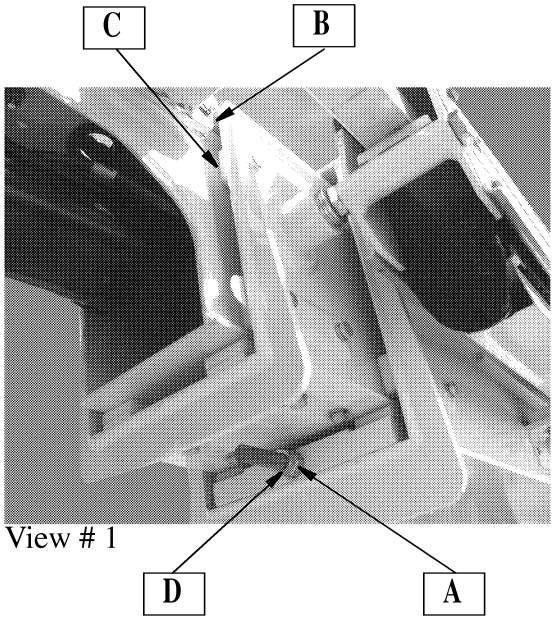
If the battery water level is below the plates, add only enough water to cover the plates, approximately 1/2 inch. DO NOT fill to indicator ring.

NOTE: With proper attention to water level the battery should have a long, useful life.

Maintenance

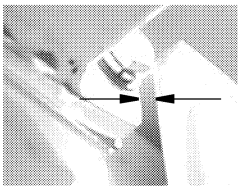
Retract and Extend Cable Tightening Procedure

1. Remove jam nut (A).
2. Retract boom completely and then extend boom approximately 3 feet.
3. Using torque wrench, tighten nut (D) to 20 ft-lbs. (Wet)
4. Extend boom fully, retract boom fully and then extend boom approximately 3 feet.
5. Using torque wrench, tighten nut (D) to 20 ft-lbs. (Wet)
6. Repeat steps 4 and 5 until 20 ft-lbs. tension in cable is maintained.
7. Reinstall jam nut and tighten jam nut securely.

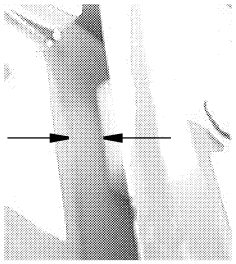


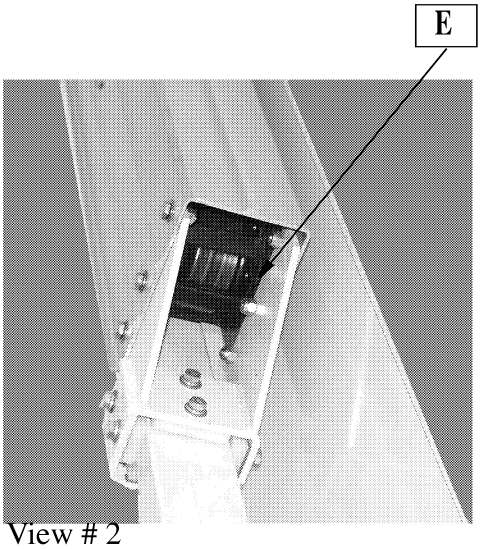
View # 1

View # 1(B)



View # 1(C)





View # 2

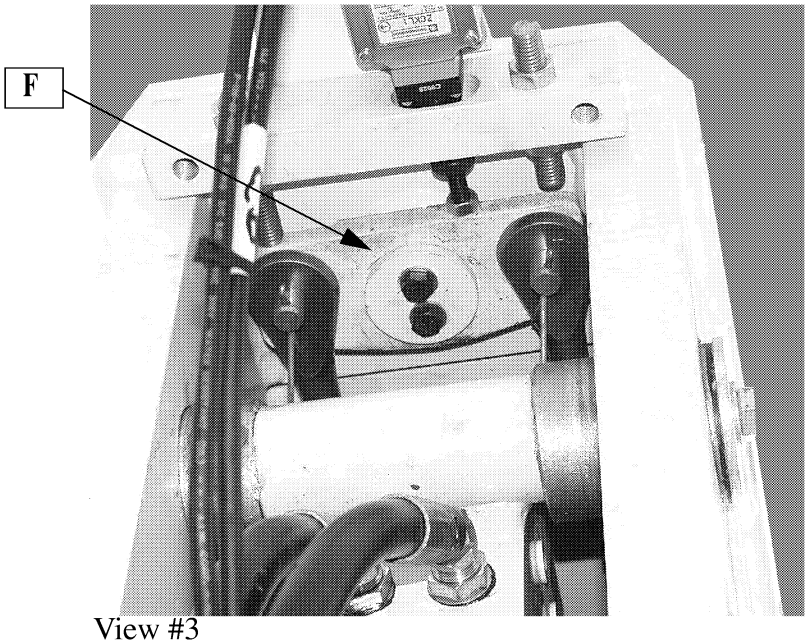
AFTER TENSIONING CABLES CHECK FOR MINIMUM 1/2 INCH CLEARANCE:

1. Between the power track attachment block on the tip section and the end of the mid section. (B) (View #1)
2. Between the tip doubler plate and mid section wear pads. (C) (View #1)
3. Between the power track and the bracket cover. (E) (View #2)

Maintenance

Retract and Extend Cable Tightening Procedure

IF THERE IS INADEQUATE CLEARANCE BETWEEN ANY OF THESE, TURN OVER EQUALIZER BAR (F) IN REAR OF BASE SECTION AS SHOWN IN VIEW #3.



View #3

CABLE TENSION MAINTENANCE:

Cable should be tightened whenever loose and checked monthly or whenever the engine is serviced.

Maintenance

Environmentally Hazardous Materials

Battery (Acid/ Lead)

Spilled or leaked battery acid:

- Neutralize the spilled quantity with baking soda or calcium-oxide by spreading, mixing, etc. Make certain that the mixture is neutral. Then collect the residue in a suitable container. Dispose of battery acid as special waste.
- Always wear acid-resistant boots and gloves and use suitable face/ eye protection.
- Do not allow non-neutralized acid to escape into the sewage system or open bodies of water.

Damaged or unusable lead batteries filled with sulfuric acid:

- Damaged or unusable batteries must be disposed of only by authorized disposal companies after emptying and collecting the sulfuric acid.
- Dispose of lead-containing sulfuric acid as special waste.

Gasoline

- Gasoline is a material which contaminates water and must under no circumstances reach the sewage system or open waters!
- Spilled or leaked quantities must be restricted to as small an area as possible. Remove by sweeping with liquid absorbing materials (oil binding agents).
- Materials or soil contaminated by gasoline must be placed in a suitable container and disposed of according to the State and local special waste disposal regulations!

Maintenance

Environmentally Hazardous Materials (Continued)

Diesel Fuel

- Diesel fuel is a material which contaminates water and must under no circumstances reach the sweage system or open waters!
- Spilled or leaked quantities must be restricted to as small an area as possible. Efforts should be made to recoup as much of the fluid as possible by scooping or vacuuming it up. Remove the remainder by sweeping with a liquid absorbing materials (oil binding agents).
- Scooped up or vacuumed up Diesel fuel oil may be reused after proper filtering.
- Materials or soil contaminated by Diesel fuel must be placed in a suitable container and disposed of according to the State and local special waste disposal regulations!

Hydraulic Fluid

- Hydraulic oils are substances which contaminate water and must not reach the sewage system or open waters.
- The spilled or leaked quantity must be confined to as small an area as possible. Efforts should be made to recoup as much of the fluid as possible by scooping or vacuuming it up. Remove the remainder by sweeping with liquid absorbing materials (oil binding agents).
- Scooped up or vacuumed up hydraulic fluid may be reused after proper filtering.
- Materials or soil contaminated by hydraulic fluid must be placed in suitable container and disposed of according to the state or local disposal regulations.

Maintenance

Environmentally Hazardous Materials (Continued)

Radiator Antifreeze

- Radiator antifreeze contains glycol and is to be considered a substance hazardous to water.
- Cooling water-antifreeze misture, therefore, must not be introduced into the sewage system or open waters!
- Dispose of cooling water-antifreeze mixtures as special waste in accordance with the State and local regulations!

Foam-Filled Tires

- Disposal of the material, classified as non-toxic, according to State and local regulations!

Engine Oil

- Engine oil is a substance hazardous to water and must not reach the sewage system or open waters!
- Remove spilled or leaked quantity wiping up with liquid absorbing materials (oil binding agents).
- Materials or soil contaminated by motor oil must be placed in a suitable container and disposed of according to the State and local special waste disposal regulations.

Emergency Procedures

Section 10

Emergency Procedures

It is not possible for us to foresee every emergency situation that could arise during operation of this machine. Information on the following pages describes several typical emergency situations, and lists appropriate actions that can be taken.

When faced with an emergency, above all please remember:

- Stay calm.
- Think through the situation before operating the machine.
- Get help if necessary.

⚠ DANGER

IF THE MACHINE FAILS WHILE THE PLATFORM IS RAISED, DO NOT ATTEMPT TO CLIMB DOWN THE BOOM ASSEMBLY. SERIOUS INJURY MAY RESULT.

HAVE AN EXPERIENCED OPERATOR USE THE EMERGENCY PUMP PROCEDURE TO SAFELY LOWER THE PLATFORM.

THIS MACHINE IS NOT INSULATED. EXTREME CARE MUST BE TAKEN WHEN WORKING AROUND POWER LINES.

DO NOT TOUCH THE MACHINE IF THERE IS A CHANCE IT IS IN CONTACT WITH POWER LINES. WAIT UNTIL THE POWER TO THE LINES HAS BEEN SHUT OFF.

Emergency Procedures

Platform in Contact with Live Power Lines and Operator Incapacitated:

⚠ DANGER

DO NOT TOUCH THE MACHINE!!!

ELECTROCUTION HAZARD!!!

Corrective Action:

1. Have someone summon first aid or rescue squad.
2. Contact authorized personnel to disconnect power supply touching the machine.
3. **Before attempting emergency lowering, check to see if the operator is:**
   - in a pinned position, or
   - **would be endangered if platform is moved.**
4. **AFTER POWER IS CUT**, lower the platform as necessary (see "Emergency Operation From Ground Control Station".
5. Render first aid to the operator.
6. **Report the incident to your supervisor immediately.**

   IMPORTANT: It is imperative that Terex Aerials be notified immediately of any incident involving a Terex Aerial Lift. Even if no injury or property damage is evident, the factory should be contacted and provided with all necessary details.

Emergency Procedures

Machine Elevated, with Operator Incapacitated at Platform Controls:

⚠ DANGER

DO NOT TOUCH THE MACHINE!!!

TRY TO DETERMINE THE CAUSE OF THE PROBLEM BEFORE YOU TOUCH THE MACHINE.

Corrective Action:

1. Have someone summon first aid or rescue squad.
2. Attempt to talk to the operator before taking any rescue measures.
3. **Before attempting emergency lowering procedure, check to see if the operator is:**
   - in a pinned position, or
   - **would be endangered if platform is moved.**
4. After establishing that the machine is not in contact with live power lines, lower the platform as necessary (see "Emergency Operation From Ground Control Station").
5. Render first aid to the operator.
6. **Report the incident to your supervisor immediately.**

IMPORTANT: It is imperative that Terex Aerials be notified immediately of any incident involving a Terex Aerial Lift. Even if no injury or property damage is evident, the factory should be contacted and provided with all necessary details.

Emergency Procedures

Emergency Operation From Ground Control Station if Platform Controls Become Inoperable:

NOTE: If Emergency Stop Switch **at the aerial control box** is activated, all controls at the aerial control box will be inoperable. Platform can still be lowered from the ground control panel.

1. Turn the **Emergency Stop Switch** on the ground control panel clockwise (in direction indicated by the arrow).

2. Make sure no **material or personnel** are beneath the platform.

3. Make sure **Ground/ Off/ Platform** key switch is turned to "GROUND".

4. **Operate** Boom functions ("DOWN" and "RETRACT") with the Emergency Pump to bring platform down. Watch out for hazards beneath **platform**.

Emergency Descent From Platform:

1. Check that the "EMERGENCY STOP" switch at aerial control station is released (turned clockwise).

2. Have ground personnel make sure that **Ground/ Aerial** switch is turned to "AERIAL" and the "EMERGENCY STOP" switch at ground control station is released (turned clockwise).

3. **Operate** Boom functions ("DOWN" and "RETRACT") with the Emergency Pump to bring platform down. Watch out for hazards beneath **platform**.

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