

This is a potentiometer type control that is used to control the volume output of the pump. With knob rotated to (-) position, volume output is MINIMAL. Turn knob CLOCKWISE toward (+) to INCREASE volume output.

**8. PUMP VOLUME SWITCH**

This is a two (2) position toggle switch used to select the pumping direction of the concrete pump. With toggle in UP position, the material is pumped out of the delivery line. With toggle in DOWN position, the material is being drawn IN from the delivery line in reverse.

**7. PUMP DIRECTION SWITCH**

This is a two (2) position toggle switch used to activate the concrete pump circuit. Move the toggle to UP position to START-UP pump. Place toggle in DOWN position to SHUT-OFF pump.

**6. PUMP SWITCH**

This is a three (3) position momentary return to center position toggle switch. It is used to control and set the THROTTLE or the ENGINE RPM. Activate the toggle to UP(+) and hold to INCREASE RPM; move toggle DOWN (-) to DECREASE RPM. Center position of switch is neutral.

**5. ENGINE RPM SWITCH**

This red light is used to indicate, when lit, that the battery is nearing exhaustion. Under most situations, the transmitter can be operated for approximately 15 minutes more after light is lit.

**4. BATTERY INDICATOR**

This green light is used to indicate, when lit, that the control is ON and is operational on the proper frequency. It will flash regularly. Commands or usage of controls can now be made.

**3. FREQUENCY INDICATOR**

The switch is also keyed, with the key being part of the removable red knob. Once emergency switch has been depressed, it can only be released by PUSHING IN on knob and turning knob with key CLOCKWISE. This also will activate the radio transmitter.



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**

This lever is used to control the function of the "B" or second boom. The direction of lever movement is vertical up-down. Move lever **FORWARD, AWAY** from operator, to **LOWER, fold boom and BACK, TOWARD** operator, to **RAISE** boom.

**12. BOOM "B"**

The **ROTATION** lever movement is a side to side direction. Move lever to the **LEFT** for **COUNTERCLOCKWISE** rotation. Move lever to the **RIGHT** for **CLOCKWISE**.

This lever is used to control the **MAIN (A) BOOM** and **ROTATION** of turret or turntable. The "A" boom lever movement is in a vertical up-down direction. Move lever back, **TOWARD** operator, to **RAISE** boom and forward, **AWAY** from operator, to **LOWER** boom.

**11. BOOM "A" AND ROTATION**

*The following three (3) controls are used for operation of the boom functions. They are of the five (5) position momentary joystick type switch, meaning the lever must be held in position to keep the particular function activated and operational. Lever will automatically return to CENTER position when released and function will CEASE to operate.*

**NOTE**

This is a two (2) position toggle switch which is used to control the maximum speed of the boom and concrete pump functions. The 100% position is full speed; the 50% position sets the maximum speed of the function at one-half full speed. Refer to OPERATION of radio to set the speed.

**10. SWITCH 50%-100%**

This is a two (2) position momentary push button switch which is used to change the frequency. This is used in conjunction with the **ON/HORN** button while operating the **FREQUENCY** button until horn sounds.

**9. FREQUENCY CHANGE**



**NEVER WELD ON ANY PART OF THE MACHINE WITHOUT DISCONNECTING THE RADIO RECEIVER, BATTERY SWITCH AND TRUCK COMPUTER. FAILURE TO COMPLY WITH THIS WARNING WILL BE A COSTLY OVERSIGHT.**

**WARNING**

- Never expose the transmitter or receiver to a high pressure cleaning jet.
  - A charged battery is a concentrated energy source. Never store a charged battery in a tool box or similar area where it could be short circuited by metal components. Even a key in your pocket can cause a short circuit if next to the battery.
  - When the radio control unit develops a fault, it must be shut-down immediately using the **EMERGENCY OFF** switch.
  - Only fully trained, authorized personnel may use the radio control equipment.
  - Observe all applicable work safety and accident prevention regulations without fail.
  - In some areas, an operating permit and registration may be required.
  - Even if you are accustomed to working with a radio control system, familiarize yourself thoroughly on the **REED** system.
- Safety can't be overstated. We have and will continue to make you **AWARE of SAFETY** on the job. Below we have pointed out some safety points, which are important and need to be followed when operating the radio remote.

**SAFETY PRECAUTIONS**

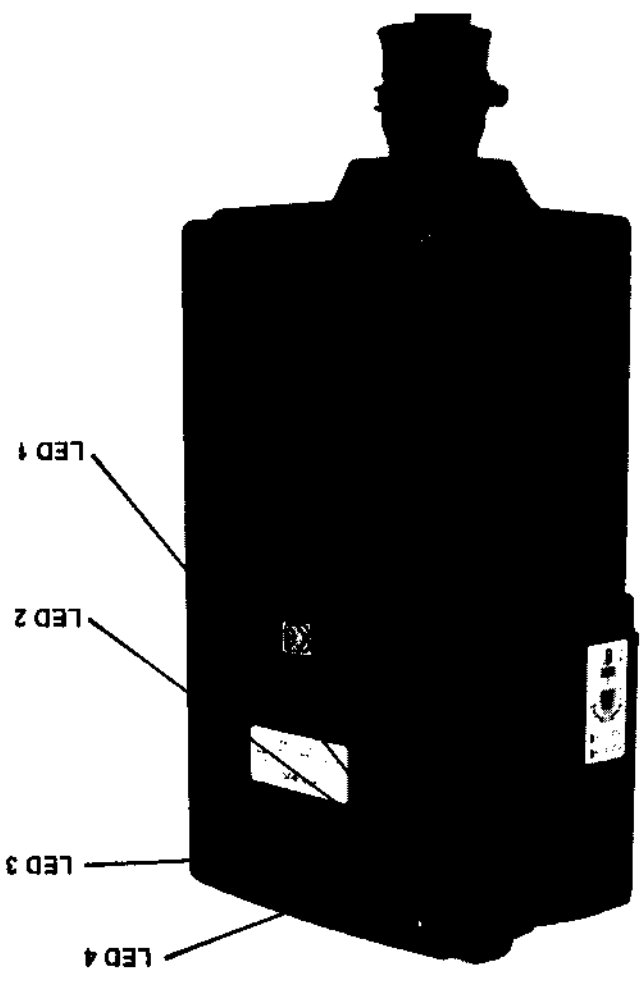
13. **BOOM "C" AND BOOM "D"**

This lever is used to control the operational functions of the "C" or third boom and "D" or fourth boom. The "C" boom lever is in a side to side direction. Move lever to the **LEFT** to **RAISE** boom and move to the **RIGHT** to **LOWER** boom.

The "D" boom lever movement is in a vertical direction. Move lever **FORWARD**, **AWAY** from operator, to **LOWER** boom and **BACK**, **TOWARD** operator, to **RAISE** boom.



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



### OPERATION INSTRUCTIONS

- Having **READ** and **UNDERSTOOD** the previous pages on **SAFETY** and **CONTROL FAMILIARIZATION**, you are now in a position to learn how to operate the unit using the radio remote.
- Set up the unit outriggers, etc. using the manual controls as previously outlined in the **OPERATION SECTION** of this manual.
  - Make the Radio Control ready for use
  - Insert a charged battery into the battery compartment of the transmitter. Note – to remove the battery, depress the pin and slide out the battery.
  - Check the connections for the receiver that they are secure.
  - Switch **ON** the transmitter by turning or releasing the **EMERGENCY OFF** button on transmitter.

# XXT42 TRUCK - MOUNTED CONCRETE BOOM PUMP



- Test the command functions of the boom, starting with the operation of **BOOM "A"** and proceed with the operation of the other booms and turntable rotation. Observe that movement of the functions correspond with the movement of the control.
- Push **EMERGENCY – OFF** switch. Operation of transmitter should cease. Verify by activating a control. Function should not operate.
- Release **EMERGENCY** switch. Activate a control, function should not operate.
- Remove battery, transmitter should cease to function. Replace battery, activate a control, function should not operate.
- Depress **ON/HORN** switch to activate function.

**COMMAND FUNCTION – TEST**

- It is a good habit to run this check-out procedure at the beginning of each day and before the actual pumping of concrete. This will assist in ensuring the unit is functioning properly.
- **LED 4:** If this indicator flashes the HF channel has been disrupted.
- **LED 3:** This indicator flashes at regular intervals during fault-free operation. Irregular flashing means the HF channel is probably disrupted. This can be remedied by switching to an alternate channel.
- **LED 2: HF AVAILABLE** – This indicator should remain lit continuously when transmitter is switched on the E-Stop.
- **LED 1: POWER ON** – Indicator should be lit. If not check:
  - Emergency E-Stops on chassis
  - Outrigger switch is in **BOOM** position
  - Switch on main panel is in **REMOTE**
- **LED** of the receiver, located on receiver face.

Regular function checks of the radio remote control are essential to insure that operating safety is maintained. It is recommended that the checks be done at least once a week. With transmitter **POWER-ON** check the following:

**MAKING FUNCTION CHECKS**



- Select the function to be programmed by moving the control lever in desired direction.
- Place the 50% - 100% switch to 50% position.
- To **TEACH** threshold, move function lever until function just begins to move then back off a little.
- At this point, to save this value, depress the **ON/HORN** button.
- Now place the 50% - 100% switch to 100% position.

## 2. SELECT ANALOG FUNCTION

- Check that all joy stick controls are in center position.
- Insert the **TEACH** battery into the transmitter battery compartment.
- Release **EMERGENCY OFF** switch and press the **ON/HORN** switch.
- The program mode is now activated.

## 1. ACTIVATE THE PROGRAMMING MODE

The **REED** radio remote system is equipped with a means to individually set the analog channels basic settings. The output signals can be individually programmed by use of the transmitter. The setting of the functions is in reality the setting of the operational speed, at full 100% maximum speed. To program the functions, the following is offered:

## SETTING ANALOG CHANNELS

- The transmitter sends it's signal to the receiver on a preset radio frequency. Often some interference may be encountered during operations resulting in a need to change the frequency. This is accomplished as follows:
- Depress the **FREQUENCY CHANGE** button and hold and simultaneously depress **ON-HORN** button until the horn sounds. When horn sounds, a new frequency is established.

## CHANGING THE FREQUENCY



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**

*In the programming mode, all functions are inoperable except ON/HORN and the functions selected to be programmed.*

**NOTE**

- Press the ON/HORN switch to energize the transmitter.
- Release the EMERGENCY-OFF switch.
- Remove the TEACH battery from the transmitter battery compartment and insert normal work battery.
- Depress the EMERGENCY-OFF switch

**3. CLOSING THE PROGRAM MODE**

*The programmed value or speed can be checked after the setting by depressing the FREQUENCY CHANGE button and holding while operating the function control. As soon as the button is released, the program mode can be continued.*

**NOTE**

- The concrete pump speed can be programmed in the same way as the boom functions except the knob is used instead of the handles. We recommend to teach the maximum speed just below where the cylinders spike.
- The opposite direction of this function and other functions can be programmed in the same manner and immediately afterward.
- Press the FREQUENCY CHANGE button.
- Save this value by depressing the ON/HORN switch.
- To TEACH maximum move function lever until desired fast maximum speed is obtained. Watch movement of manual control valve handles.



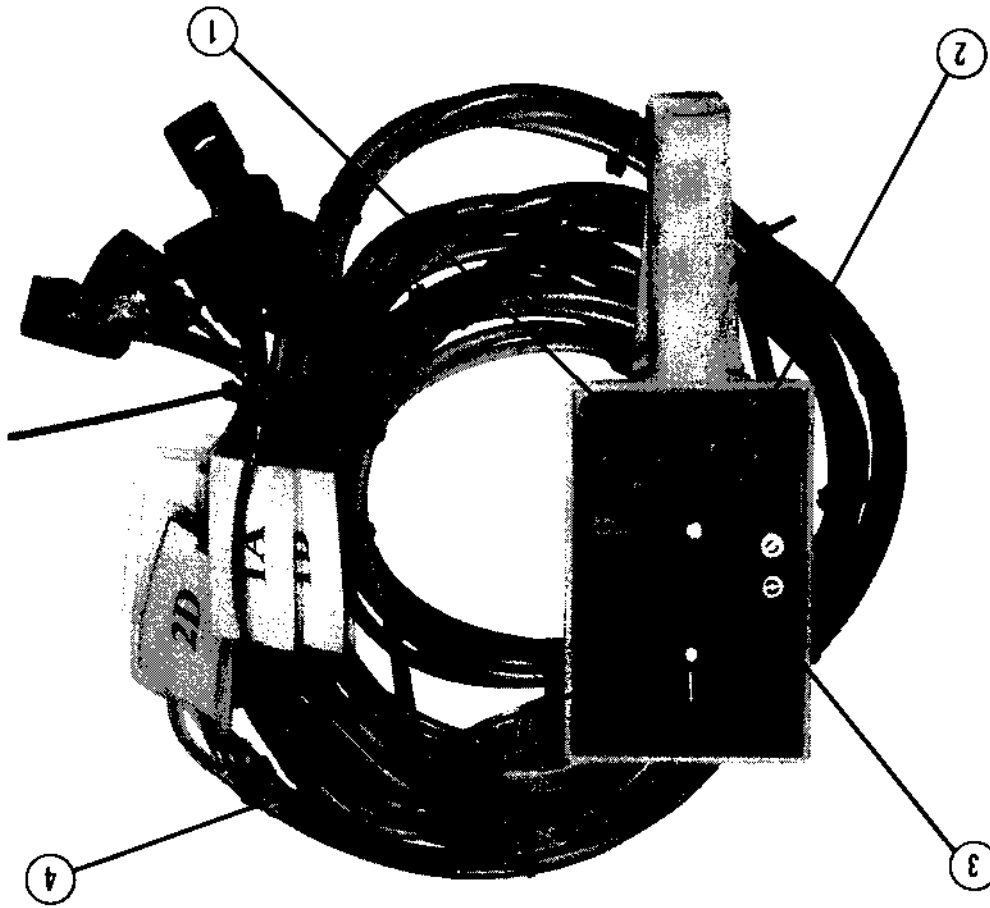


### BATTERY CHARGER

- The battery charger is located in the chassis cab and operates utilizing the chassis electrical system. To charge a battery the following is offered:
- Turn chassis ignition key **ON**. Green indicator light on charger should be lit.
  - Insert dead battery into charger. Both green and red light should be lit.
  - Battery will continue to charge as long as ignition switch is **ON**. An exhausted battery will take about 3½ hours to fully charge.
  - When battery is fully charged, both the green and red light will flash.
  - The battery can be left in the charger without doing harm to the battery itself.







### 1. STROKE CHANGE SWITCH

This is a three (3) position momentary toggle switch and is used to change the stroke of the material and hydraulic cylinders to pump from one side to the other. **CENTER** position of switch is **OFF** (non-cycling). Move switch **UP** and **HOLD** to cycle pump. When piston has bottomed out (completed stroke), move switch **DOWN** and **HOLD** to cycle other cylinder.

The control consists of a hand held console equipped as follows:

The purpose of this **EMERGENCY STROKE/REVERSE CONTROL** is to enable the concrete pump to be operated in an emergency situation, which might involve a faulty proximity switch or a loss of electrical power to a major component and/or main control system. This control when properly connected will enable continued operation for completion of pumping job.

## EMERGENCY STROKE/REVERSE CONTROL

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



1. On the stroke change valve, remove the existing connectors marked "Y8 - Y9" and connect cable #1 - "1A" to "Y8" and "1B" to "Y9".
2. On the S-tube valve, remove the connections "Y5" - "Y6" and connect cable #2 - "2C" to Y5 and "2D" to Y6.
3. On proportional valve, remove connector "Y7" and on accumulator dump, remove "Y4". Replace with cable #3 - "3F" on "Y7" and "3E" on "Y4".
4. On the end of the battery supply cable there are two alligator clips, red and black. Connect the red clip to the positive terminal of the battery and the black clip to ground terminal of battery. Any 12 VDC battery will work (ie pick up truck / Car).
5. Check operation and connections; push in on **EMERGENCY STOP**, knob should not be lit up. This will indicate that the control is not receiving power. Pull up on knob to activate system. System should now function. Knob will light up **RED**.

Make the connections as follows:

When the situation calls for the use of the Emergency Stroke/Reverse Control, it will be necessary to make certain connections for it to be operational. The control unit is equipped with three (3) cables, each having two (2) connectors. These are to be connected to the main systems hydraulics which are mounted on top of the hydraulic drive cylinders.

## OPERATION CONNECTION

This is a potentiometer type control and is used to adjust and set the **OUTPUT** discharge volume of the concrete pump or the **SPEED** in which the pump is cycling. Position #1 is **LOW** speed; position #8 is **HIGH** speed.

### 4. VOLUME CONTROL

This is an emergency switch and is used to shut down the pump in an emergency situation. It is of the push-pull type. Depress **PUSH** knob to **STOP** operation. **PULL** knob out to **REACTIVATE** system.

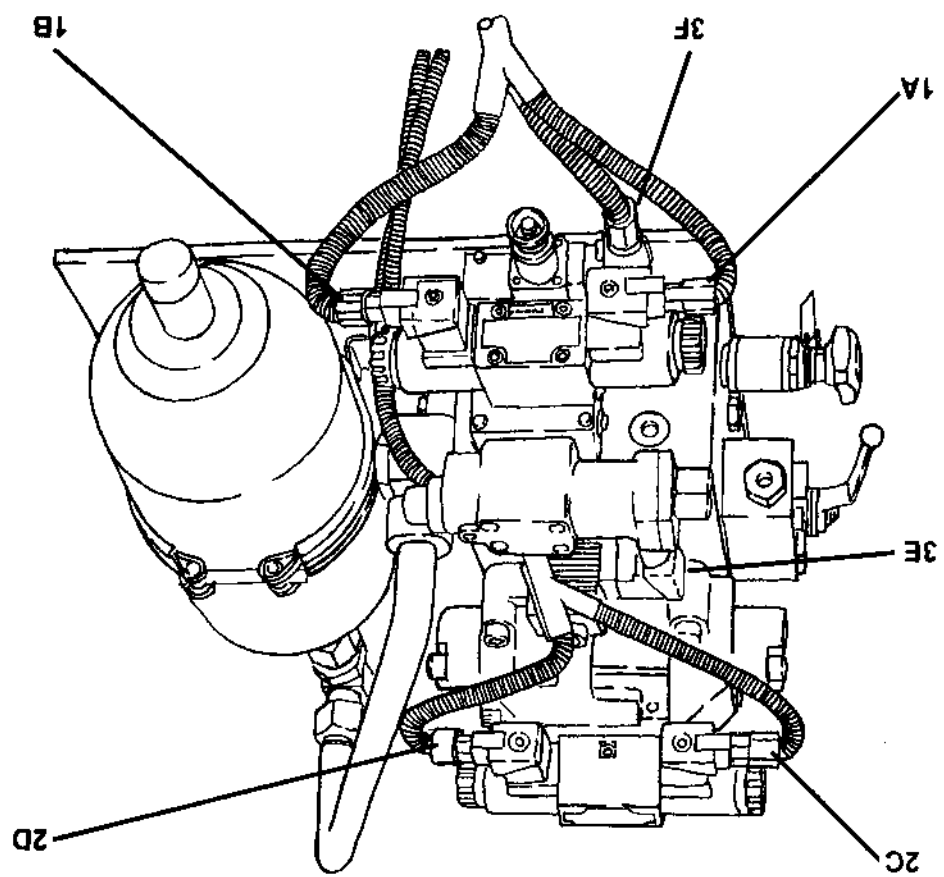
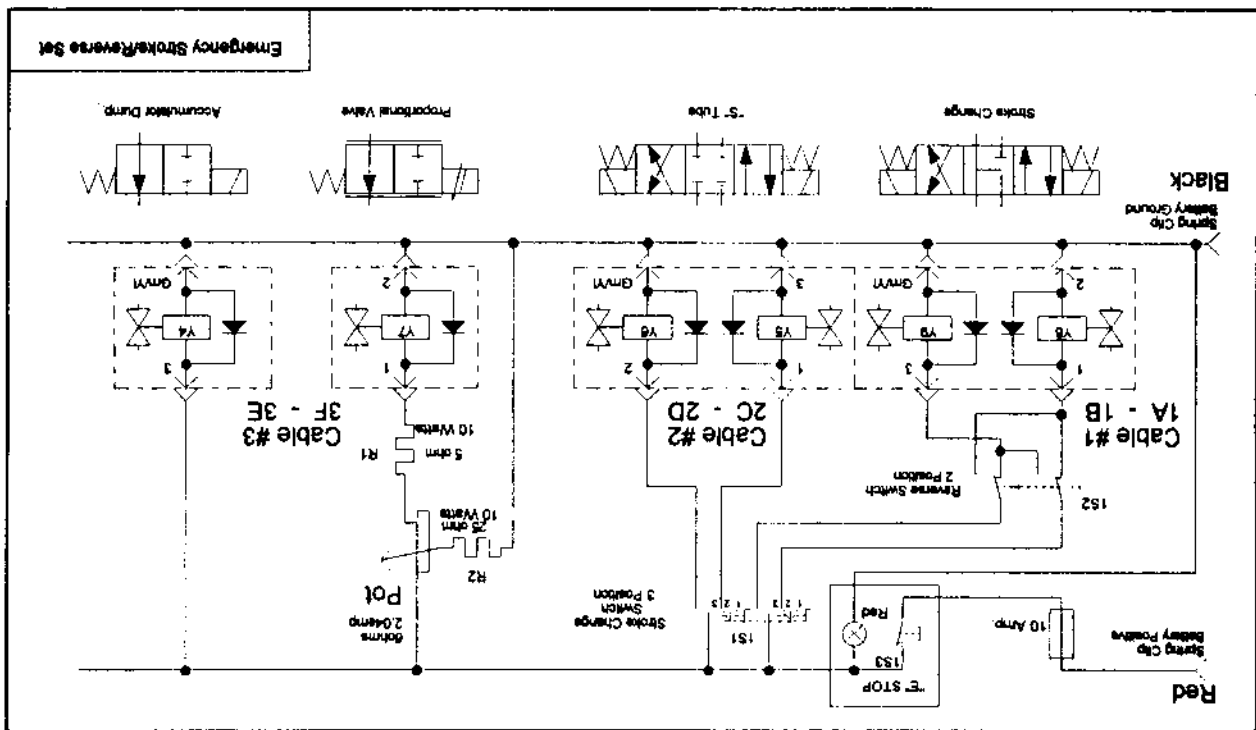
### 3. EMERGENCY STOP

This is a two (2) position toggle switch and is used to change the pumping direction of the material cylinders. With switch in **DOWN** position, pump is cycling in **FORWARD** position, discharging material out from hopper. Move toggle to **UP** position, pump will cycle in **REVERSE**.

### 2. FORWARD/REVERSE

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**





**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



1. All those that are involved in the operation, maintenance and repair of the **XXT 42** must read and be familiar with this operator's manual prior to operation of the equipment.
2. Always wear an approved safety helmet while working around the concrete pump and construction site. Protective safety goggles to eliminate eye burns and damage as well as hearing protection may be found helpful.
3. Make sure only authorized personnel are in the vicinity of the unit or on the unit.

**SAFETY** can't be **OVERSTATED**. We have and will continue to make you **AWARE** of **SAFETY** on the job. Below we have pointed out some safety tips, which are important and need to be followed during operation.

### OPERATING INSTRUCTIONS SAFETY TIPS

**OBSERVE ALL SAFETY PRECAUTIONS WHILE OPERATING THIS MACHINE.**

#### ▲WARNING

*For your own SAFETY and others around you it is your RESPONSIBILITY to insure the unit is in proper working condition. Check out the unit by using the PRE-OPERATION INSPECTION notes previously identified.*

#### ▲CAUTION

Having **READ** and **UNDERSTOOD** the previous pages on **SAFETY** and **CONTROL FAMILIARIZATION** you are now in a position to learn how to operate the unit. If you have not **READ** the **PREVIOUS** pages we **SUGGEST** you do so **BEFORE PROCEEDING**.

### OPERATION INSTRUCTIONS



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**

4. Be sure those other than the operator are aware the unit is remote controlled and could start up at anytime.
5. Never allow anyone to stand on hopper grate.
6. If failure or malfunctions occur, stop the operation and have repaired immediately.
7. Safety devices **MUST NEVER** be disconnected, altered or removed.
8. Clear area of personnel and obstructions before extending outriggers.
9. Outriggers and jacks must be fully extended before boom is operated, unless precautions are taken as noted in **WARNING – OPERATING CONFIGURATION** decal.
10. Ensure stability of unit. When in doubt of the ground condition use extra blocking under jack legs.
11. Maintain a safe distance from excavations when setting up operation.
12. Do not drive with boom unfolded or outriggers extended.
13. Boom should not be used where wind speed exceeds 48 MPH. In a storm condition lower boom and place in stored position on chassis.
14. The main boom must be raised to 28 feet to release transport hook before boom section B can be opened.
15. Safety chain, whip check or other suitable securing devices must be used to secure the tip hose to the boom.
16. No structural extension or additional hose should be added to the boom tip section. Only one (1) tip hose 13 feet long is allowed, unsupported.
17. Do not use boom structure as a crane, hoist or any other form of lifting. This is strictly **PROHIBITED**.
18. **DANGER OF ELECTROCUTION** - Keep a minimum of 17 feet away from any electrical wires. Even though you are away from the chassis and using the remote control the umbilical control cable is still conductive. **BWARE**.
19. Engage outrigger transport lock device before traveling, if so equipped.



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**

Position the MODEL XXT 42 so that safe stability is guaranteed for the entire operating range of the boom. To accomplish this, it is necessary that all outriggers must be fully extended and vertical jacks must be properly set.

## STABILIZING THE MACHINE

*The operator is responsible for the complete working area when using the machine. He must determine if the area will provide the required stability, overhead clearance and unobstructed view. If the planned location does not meet the requirements of safe set-up he must REFUSE to set-up and look and propose alternate areas even if it means relocating and reset-up during the job.*

### ▲ WARNING

What about the overhead area? Is the area clear of any obstructions such as electrical wires, trees etc., that may hinder the operation of the boom? Don't take chances. The boom can be maneuvered into various articulated configurations, which, if working in a tight area could be an unsafe operation.

Get out of the truck, look and walk around the entire area of the proposed set-up. The machine should be located on as level ground as is possible. It should be set up in such a manner that its stability is ensured. Keep a sufficient distance away from slopes, pits, trenches and excavations. These areas may collapse under the pressure of the outrigger legs. Never set up on dumped dirt or ground.

Choose an area as near as possible to the placement site. When selecting the set up area, look and determine if the operator will have a perfect view over the whole area. If the operator does not have a total clear view, will a second person be available as a guide to marginal viewed areas

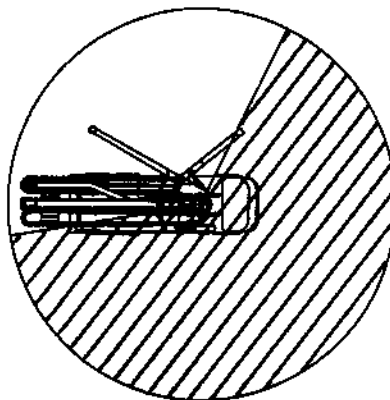
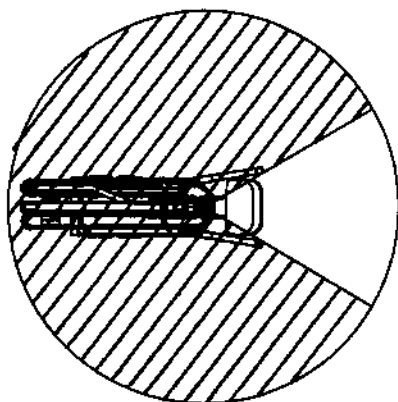
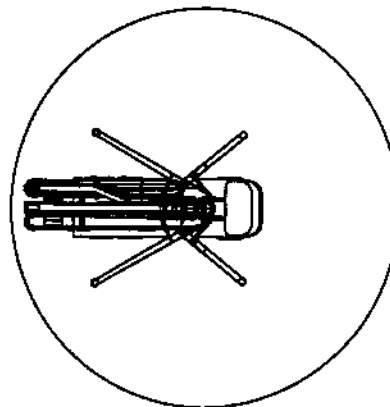
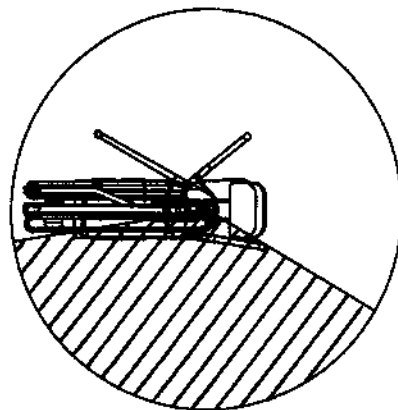
Your first and primary concern when arriving at the job site is to insure the machine can be safely set up and safely operated. Don't jeopardize a safe operation for moving a few feet closer to the placement site.

Remember the MODEL XXT 42 weighs over 50,000 lbs. (22,700 kgs) and should receive special care and attention around the job site.

## SELECTION OF SET-UP AREA

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**





**REED MODEL XXT42 DRAGONFLY**  
TYPICAL OPERATING CONFIGURATIONS

**THIS AREA REQUIRES OUTRIGGER TO BE FULLY EXTENDED AND OPENED AS SHOWN. ALL FOUR (4) VERTICAL JACKS MUST BE SET PROPERLY ON FIRM LEVEL GROUND. CHASSIS MUST BE LEVEL SIDE TO SIDE AND FRONT TO REAR.**

**DO NOT OPERATE OR ROTATE ANY PORTION OF BOOM IN THIS AREA. DUE TO DANGER OF TIPOVER.**



**WARNING**

This is the **RECOMMENDED** - SAFE manner in which to operate the boom pump. However, situations may be encountered that prevent the setup of total or full outrigger extension. In these conditions, the following guidelines must be observed and it is the responsibility of the operator to be **ALERT** to the **OPERATING CONFIGURATIONS**. The chart below indicates areas of operation and non-operation when all outriggers are not extended. Extreme care must be exercised when operating under these conditions.

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



The load bearing capacity on the subsurface is expressed in PSI. The table above depicts a few indicative values by which the resistance of the support surface can be determined.

**NOTE**

PERMITTED SURFACED PRESSURES (Ps)	
Type of Surface	KN/m <sup>2</sup>
Normal Ground	150
Asphalt with 7.8" (20 Cm) minimum thickness	200
Tamped crushed stone	250
Clayish and slimy ground	300
Different degree of granulated ground	350
Gravel	400/500
Suitable compressed gravel	750
Crumbly weathered rock	1000

**TABLE 1**

There is no fool proof method that can be used to ensure positive and absolute stability as there are too many factors involved. We have inserted the following data to assist you in determining the condition, however, it will all depend on how well you know your equipment, your experience and how alert you are to the ground conditions as you operate the unit.

Each jack leg is equipped with a circular pad, however when unit is set up it is **REQUIRED** that the furnished outrigger pads be placed beneath the jacks. This aids in spreading out the force over a large area. There may be times when it will be necessary to place additional larger pads or blocking under the jack pads to keep from sinking.

When stabilizing the machine, keep in mind that when the outriggers and jacks are positioned, the entire weight of the chassis and boom is supported by the jacks. At some positions, the load may be equally distributed on the jacks and depending on the position of the boom, the load on one or two jacks may be substantially increased.

- Telescopic front leg(s) must be fully extended and rear leg(s) must be fully swung out.
- Boom must be folded and in vertical position before rotating to operating area.
- Tip boom and hose must always remain on same side and between extended outriggers.

**BE ALERTED to these and try to PREVENT the inevitable of TIPOVER.**

**PRECAUTION AWARENESS (OUTRIGGER NOT FULLY EXTENDED)**



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



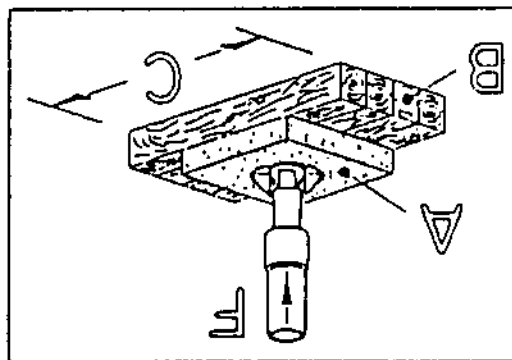
You are going to set up on an asphalt surface that has minimum thickness of (20 Cm). Look at Table 1, it shows the resistance value for asphalt is 200 KN/m<sup>2</sup>. Take note of the plate fastened to each vertical jack. This indicates vertical jack/stabilizer load expressed in KN. Check maximum loads on both front and rear stabilizers as the values may differ.

**EXAMPLE IN TABLE USE**

Table 2 is arranged according to the resistance values of the ground and the stabilizing load of the machine depicting the minimum length of wooden blocks/joists that are to be positioned under the auxiliary plate of the jack. It also indicates whether the ground surface is unsuitable or unreliable for the stabilizing operation.

**TABLE 2**

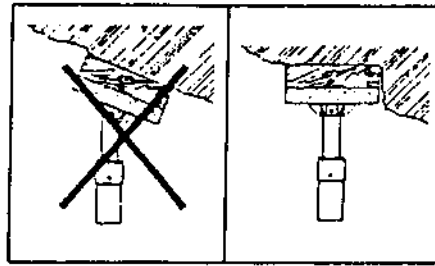
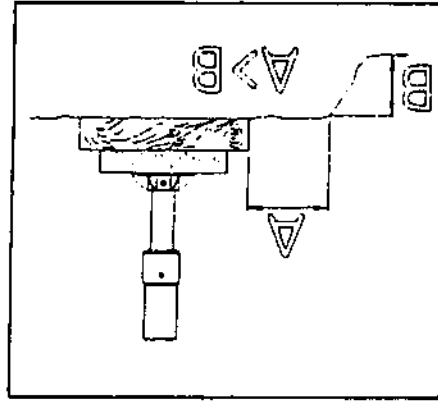
PERMITTED SURFACE PRESSURES (P <sub>s</sub> ) from the table above, expressed in KN/m <sup>2</sup>	STABILIZER LOADS (F) from the jack plates, expressed in KN										MINIMUM LENGTH (C) OF THE JOISTS (B) expressed in cm.															
	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	150	200	250	300	350	400	500	750	1000		
surfaces suitable for stabilizing operations using only the 60x60 cm. support plate (A)	84	112	138	166	194	222	250	278	306	334	362	390	418	446	474	84	104	126	147	166	184	203	244	285	326	367
	84	96	112	126	138	154	166	184	199	214	229	244	259	274	289	84	94	106	120	132	144	153	166	180	199	218
surfaces unsuitable for stabilizing operations	84	89	84	84	84	84	84	84	84	84	84	84	84	84	84	84	104	126	147	166	184	203	244	285	326	367
	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	104	126	147	166	184	203	244	285	326	367
without using wooden joists (B)	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	104	126	147	166	184	203	244	285	326	367
only the 60x60 cm. support plate (A)	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	104	126	147	166	184	203	244	285	326	367
stabilizing operations using only the 60x60 cm. support plate (A)	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	104	126	147	166	184	203	244	285	326	367
without using wooden joists (B)	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	104	126	147	166	184	203	244	285	326	367



**XXT42 TRUCK - MOUNTED CONCRETE BOOM PUMP**



Always remain at a safe distance from slopes, foundation excavations and the like. Follow the simple guideline noted above: the distance between the stabilizer jack and the trench should always be equal to or greater than the depth of the trench itself.



The ground surface should be level. If the support plates are positioned on upward projecting hills, bumps or hollows they will break. On sloping ground condition position the plates on a level as shown below.

*The positioning of the machine on slopes or embankments may cause instability as a result of the support surface sliding.*

**WARNING**

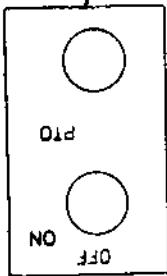
Now look at Table 2, the left side vertical column denotes the values of permitted surface pressure found in TABLE 1 (Asphalt = 200 KN/m<sup>2</sup>). The stabilizer loads (identified on jack plates) are noted across the top of the table. Assume the stabilizer load was 150 KN/m<sup>2</sup>, find that column and read down to where it reads across for the 200 KN/m<sup>2</sup> value in left column. The intersecting figure is 126 Cm (49.6 in). This means that the minimum length of the joist/blocks to be placed under pad is 126 Cm (49.6 in).

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



The PTO KEY SWITCH is interlocked with the clutch pedal. Before switch can be turned the clutch pedal needs to be depressed and held while making switch.

**NOTE**



- TO OPERATE PUMP AND BOOM
1. POSITION TRUCK AND SET PARKING BRAKE.
  2. DEPRESS CLUTCH AND SHIFT TO 7TH GEAR HIGH.
  3. TURN PTO ON.
  4. RELEASE CLUTCH TO ENGAGE PUMPS.
  5. SET THROTTLE AT 1600 RPM MAXIMUM.
- TO RETURN TO DRIVING MODE
1. RETURN THROTTLE TO IDLE.
  2. DEPRESS CLUTCH AND TURN PTO OFF.
  3. SHIFT TO NEUTRAL AND RELEASE CLUTCH.

**OPERATING THE OUTRIGGERS**

- While in the chassis cab, depress clutch pedal and place transmission in **NEUTRAL**.
- Start truck engine and deactivate Jake Brake (if engaged) by placing switch on dash to **OFF** position.
- Depress clutch pedal and engage power take off by turning **PTO KEY SWITCH** on dash to **ON** position. Indicator light adjacent to switch will light when **PTO** engaged.
- Shift transmission to **SEVENTH (7<sup>TH</sup>)** gear.

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



- Check that the chassis brake is applied.
  - Outside the chassis cab **INCREASE** the engine **RPM** to 1600. This can be accomplished by using the **RPM** toggle switch at rear control panel.
  - Place chocks under the chassis wheels.
- ▲ CAUTION**
- Before proceeding, walk around the unit and make sure the area where outriggers will extend is clear of obstructions. Also once again check the ground condition.*
- Lock pins are provided as a safety item to retain the telescopic leg in the retracted or extended position. Before operating the outrigger controls, release the lock pin located on the underside of the rear swing out leg just forward of the rear wheels.
  - At main control panel on chassis deck, place outrigger switch in **DOWN** position to energize outrigger circuit.
  - Depress and hold **SAFETY INTERLOCK** button and actuate **FRONT SWING LEG** to **SWING OUT** position. Continue to activate until leg is fully swung out.
  - Actuate **FRONT TELESCOPIC LEG** control lever to **EXTEND** leg out toward cab. Hold **SAFETY INTERLOCK** button and **TELESCOPIC LEG** control until beam is fully extended. Lock telescopic leg in position using lock pin on underside of front swing out leg.
  - Actuate **RIGHT FRONT JACK** lever **TOWARD** you and lower jack pad to approximately 12 inches (304mm) from ground.
  - Move **RIGHT REAR OUTRIGGER LEG** control lever **TOWARD** you causing leg to swing out. Hold until leg is fully extended.
  - Actuate **RIGHT REAR JACK** control lever and lower pad to about 12 inches (304mm) from ground.
  - Proceed to **LEFT** (street) **SIDE** outrigger control panel and operate the appropriate controls to position the left side outriggers, front and rear, following same procedure as that for right side.



Placing this switch in OFF position prevents accidental or unintentional actuation of the outrigger controls.

**NOTE**

- With unit now stabilized to your satisfaction **DE-ACTIVATE** outrigger controls by turning outrigger switch to **OFF** position.

**THE MAXIMUM ADMISSIBLE INCLINATION IS 3 DEGREES**

**CAUTION**

- To level unit, actuate the jack control in appropriate direction while holding **SAFETY INTERLOCK** switch. Monitor the **LEVEL SIGHT** gauge located near control panel. When bubble is lined up in center the chassis is level.

*The unit shall be set up as level as possible in both directions, latitudinal (side to side) and longitudinal (front to rear).*















**NOTE**

**OVERTURNING OF MACHINE CAN OCCUR IF OUTRIGGER LEGS ARE NOT FULLY EXTENDED.**

**WARNING**

- **NOTE** - Each jack leg is equipped with an extension to which the foot plate is mounted. The purpose of the extension is to provide additional jack stroke for better leveling on uneven terrain.
- To use, remove retaining clip on lock pin, then remove lock pin. Keep clear of extension as it will fall down. Line up top hole of the extension with jack cylinder hole and reinsert lock pin and retaining clip.
- If jack leg is resting on ground, use jack controls to raise leg. Place the **AUXILIARY PADS** and any required **BLOCKING/JOISTS** under jack legs.
- Do this for all four (4) jack legs, then using controls **LOWER** jack **DOWN** until chassis tires are raised approximately 5-6 inches (127 - 152mm) off the ground.



	<p>13. ALL DONE CLEAN UP</p> 	<p>12. ADD WATER 4-GALLONS</p> 	<p>11. LITTLE BIT</p> 	<p>10. STOP PUMP</p> 
<p>9. SLOW PUMP DOWN</p> 	<p>8. START PUMP SPEED UP</p> 	<p>7. STOP BOOM</p> 	<p>6. CLOSE OR RETRACT BOOM</p> 	<p>5. OPEN OR EXTEND BOOM</p> 
<p>4. BOOM RIGHT</p> 	<p>3. BOOM LEFT</p> 	<p>2. BOOM DOWN</p> 	<p>1. BOOM UP</p> 	

AMERICAN CONCRETE PUMPING ASSOCIATION  
HAND SIGNALS

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



- Check that **EMERGENCY STOP** switch for boom remote control is **RELEASED**.

*Before operating or unfolding BOOM "B", visually check if catch hook has released. If hook has not released, operate BOOM "B" control to DOWN position.*

**CAUTION**

- Rotate the pedestal turret in a **RIGHT** or **LEFT** direction until the boom can be unfolded out over the cab.
  - Boom "A" - main boom needs to be raised to a height of 32' - 0" (9.85 m) before unfolding boom.
- With a good understanding of the control and boom movement the operation is relatively simple. However, certain points need to be noted for efficient safe operation.

*The boom functions can be operated at the ground panel on the right side of the chassis or from the remote control console. It is **RECOMMENDED** that the **REMOTE CONTROL** be used as it permits more operator movement and better visual contact of the operation.*

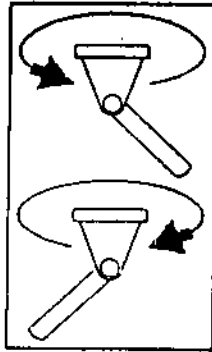
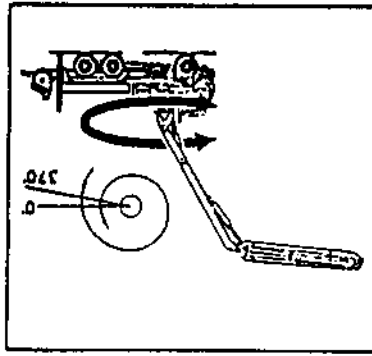
**NOTE**

Prior to operation of the boom it is suggested that a **REVIEW** be made of the **GETTING ACQUAINTED (UNIT FAMILIARIZATION)** section, in particular the area pertaining to the **BOOM CONTROLS**. This will reinforce your understanding of the functions of each control and the corresponding reactions or movement of the boom.

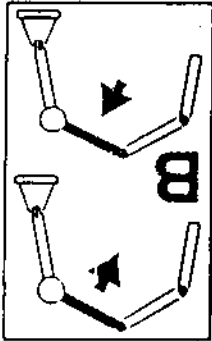
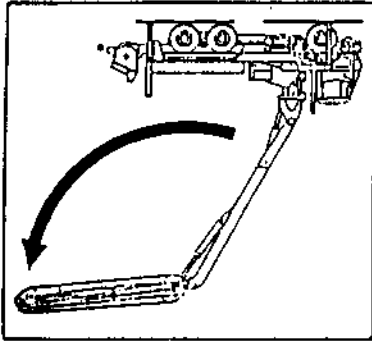
**OPERATION OF THE BOOM**



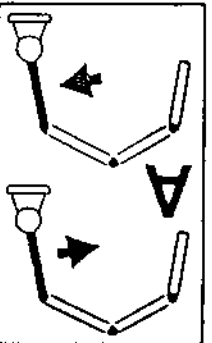
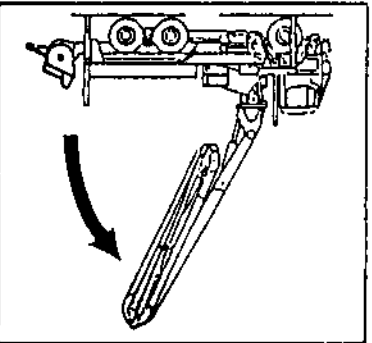
**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



3. Actuate the ROTATION control moving the unit RIGHT or LEFT until structure is over front of cab.



2. Actuate control lever "B" to raise boom "B" opening to at least 120°.



1. Actuate control lever "A" so that the entire structure is raised to approximately 60°.

With remote control console connected to panel on chassis bed or using the radio remote and engine started, PTO engaged and RPM set, proceed to operate boom controls as follows:

*Keep in mind that when an emergency or danger condition is imminent the boom operation can be stopped by DEPRESSING the STOP switch.*

**CAUTION**

# XXT42 TRUCK - MOUNTED CONCRETE BOOM PUMP



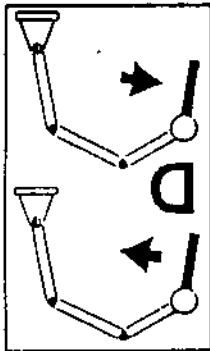
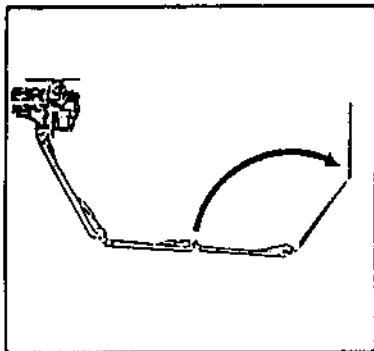


At the conclusion of the pumping job it will be necessary to fold boom and prepare it for transport. Fold boom in REVERSE manner from that depicted to unfold boom.

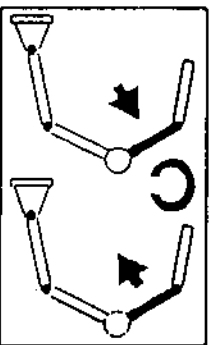
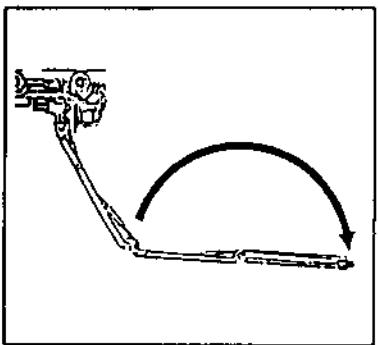
### CLOSING AND BOOM STORAGE

The working position shown in the previous illustrated diagram must not be exceeded during the pump operation. DO NOT WORK THE BOOM OUTSIDE THESE POSITIONS.

**WARNING**



5. Open BOOM "D" to desired position.



4. Open BOOM "C" with appropriate control to approximately 180°.



- At the outlet end of the hopper after swing elbow a slurry port is installed in the make up adapter. Open clamp and remove cap.
  - With concrete material in hopper and pump ready to go, pour slurry mix into port. Replace cap and lock clamp.
  - With agitator operating, controlled by lever just behind hopper, turn on agitator.
- The amount of grout needed to lubricate the system depends on the harshness of the material to be actually pumped. The boom itself is over 138 feet (42.0m). Experience will eventually indicate the amount to be required.
- The grout used for priming and lubrication should consist of two (2) parts sand and one (1) part cement and mixed to a consistency of thick soup or by using a commercially available pre-mix. This will coat the delivery line ahead of the actual concrete mix to lessen the possibility of packing when the line is filled with concrete.

### PRIMING THE PUMP AND DELIVERY

*Before proceeding to cycle the concrete pump, it will be necessary to prime the pump and delivery system. A coating of lubricating grout will need to be pumped through the delivery lines. This enables the regular concrete mix to flow smoothly.*

### NOTE

Prior to operation of the concrete pump it is suggested that a **REVIEW** be made of the "GETTING ACQUAINTED" (UNIT FAMILIARIZATION) section, in particular the area pertaining to the **PUMP CONTROLS**. This will reinforce your understanding of the functions of each control and the corresponding reactions or movements.

Observe all safety precautions while operating the unit. Remember it is your **RESPONSIBILITY** to insure that the unit is in proper working condition. If you have as yet not done so, please run your pre-operation inspection now prior to **START-UP**.

Take a moment to visually inspect that all delivery piping from the hopper to boom tip is in good condition. Check all the piping, fittings and clamps that they are secure. With this accomplished, start up chassis engine, engage **PTO** and allow hydraulic system to warm up.

### OPERATION OF THE CONCRETE PUMP



# XXT42 TRUCK - MOUNTED CONCRETE BOOM PUMP

- Start pump by placing **PUMP** switch to **ON**.
- Turn **VOLUME** control to **LOW**. **DO NO OPERATE** at full volume while priming and lubricating the system.
- Adjust **ENGINE SPEED**, moving switch to **INCREASE**.
- Check that **PUMP** switch is **OFF** and **DIRECTION** switch is in **FORWARD** position.
- On remote panel, check **EMERGENCY STOP** switch that it is released to energize control panel.
- Place **PANEL** switch to **REMOTE**.
- Connect remote control umbilical cord to the fitting at chassis panel, or set up the radio remote transmitter.

**REMOTE CONTROL OPERATION**

- Start the pump by placing **PUMP** switch to **ON**.
- Turn **VOLUME** control to **LOW** position. **DO NOT OPERATE** at full volume while priming and lubricating the system.
- Adjust **THROTTLE / ENGINE SPEED** moving switch to **INCREASE** and holding until speed reaches 1600 RPM.
- Check that **PUMP** switch is **OFF** and the **DIRECTION** switch is in **FORWARD** position.

**CHASSIS PANEL OPERATION**

*The operation of the concrete pump can be controlled at the CHASSIS control panel or using the REMOTE control. Always start pumping SLOW until a steady flow of concrete is discharged from end of tip hose.*

**NOTE**

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



With stiffer consistency and unfavorable grading curve of the aggregate, (smaller portion of sand, crushed materials) the rate of filling the material cylinders becomes less efficient resulting in a lesser concrete output. When you encounter this condition it is suggested that pumping at a slower speed can positively increase the output by allowing more time to fill the material cylinders.

- The concrete output is influenced and related to the quality and consistency of the concrete mix. Mix consistency is a decisive factor when it comes to the filling rate of the material cylinders.
- Always maintain the material level in the hopper to no less than the height of the mixer shaft height or 1/2 full. This is **IMPORTANT** otherwise air will be sucked into the material cylinders and the continuous smooth flow may be interrupted.

Your **SAFETY** is our utmost **CONCERN** and it is your **RESPONSIBILITY** to operate the equipment in a **SAFE** manner. The following **TIPS** and **PRECAUTIONS** are offered as **AWARENESS** facts and should be **OBSERVED** for proper safe operation.

### PUMPING TIPS AND PRECAUTIONS

*When operating the pump, the MAXIMUM conveying PRESSURE must not be HIGHER than that which has been stamped on the DATA PLATE.*

### CAUTION

Fill the hopper with a uniform concrete mix that is required to do the job and continue to pump the concrete. After the actual mix starts coming out the tip hose, the pump **VOLUME** can be **INCREASED** if so desired.

*When an E-STOP switch has been depressed during pumping operation, to restart operation it will be necessary to pull out affected E-STOP knob, turn pump switch OFF, and sound horn using toggle switch. Pump can then be turned on.*

### NOTE

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



- When it is necessary to pump unfavorable mixes such as extremely stiff, under sanded, lightweight concrete, the best procedure is to keep the mixer/agitator shaft visible all the time. In so doing, the hopper will only be filled to the lower edge of the mixer shaft making the concrete easier to pump.
- This method is called the **AIR-PLUG** method, which allows air to be sucked into the material cylinders along with the unfavorable concrete mix.
- When it is necessary to pump concrete that is very liquid and has a high percentage of rough aggregate that tends to separate, keep the concrete level in the hopper as low as possible in case you encounter a work stoppage.
- Concrete that has separated or has begun to set and become lumpy should never be pumped.
- It is common that at sometime during the concrete placement you will be required to stop pumping for a period of time. This could be job site problems or possibly lack of concrete. Regardless of the reason, it is **IMPORTANT** to **MOVE** the concrete in the line during these periods. This can be accomplished by operating the pump in **REVERSE** for 2-3 strokes and then after another 10-15 minutes operate the pump **FORWARD** for 2-3 strokes.
- Downtime between forward and reverse movements will depend on the consistency and type of mix. Also if shut-down is for too long a period it may be necessary to clean out the delivery system and concrete pump. Determine this from your experience in the material being pumped.
- Avoid having the material in the hopper separate during shut down. Vibration caused by chassis engine could have an effect on the material separating. We suggest the **PTO** be disengaged and engine be turned off if shut down exceeds 4-5 minutes.
- Air pockets in the delivery line can be dangerous as the air compresses within the delivery line and when it is released abruptly at the end of the line, the concrete being pumped is discharged in an explosive manner. Avoid air pockets. Keep sufficient material in hopper to prevent the induction of air into the material cylinders.
- Never bend or kink the concrete flexible end hose during the pumping operation. A kink is an obstruction, which can stop the material flow, allowing pressure to build up in the system creating a dangerous condition.
- When this occurs the pumping direction must be **REVERSED** for 3-4 strokes to relieve the pressure in the line. Stop the pump and straighten out the kink, then resume pumping.



# XXT42 TRUCK - MOUNTED CONCRETE BOOM PUMP

**NEVER ATTEMPT TO CLEAR A PACK OR  
BLOCKAGE IN THE DELIVERY SYSTEM USING  
THE PUMP PRESSURE.**

**▲ WARNING**

- Switch the pump OFF
- Place the pump direction switch to **REVERSE**. Then turn the pump switch to **ON** allowing the pump to stroke 2-3 times in reverse to assist in relieving the pressure from the delivery line blockage back to the pump outlet
- Blockage in the delivery line during pumping operation will no doubt happen at one time or another. An observant alert operator, who can recognize the symptoms is of great value. A blockage can create excessive pressure in the system, which is a dangerous condition. When this occurs **IMMEDIATELY STOP** the pump.

**CLEARING A PACK OR BLOCKAGE**

- Do not allow the tip boom to be guided or maneuvered by hand especially during the initial phase of the pumping operation. Insist that the person assigned to guide the hose use a special tool.

**Never extract an immersed tip hose from the  
concrete by lifting with the boom.**

**▲ WARNING**

- There is a risk of accident should the tip hose be immersed in concrete. Should this occur for any period of time, operate pump as noted above, then fill hose. When pumping operations begin after cleaning an obstruction, allow end hose to hang free and keep personnel from entering the area.

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**



*The flushing and cleaning operation should only be done at LOW RPM and at LOW VOLUME position.*

**NOTE**

Two (2) different methods can be used and each in its own way will produce a satisfactory job if done correctly. The two methods to be used are the **SUCTION** method and **WATER UNDER PRESSURE** method. The following is offered to describe the procedure for accomplishing this operation.

This sometimes may seem tedious, tiresome and a distasteful task, more so because the pump job is finished and cleaning the system is the last operation of the day. However, the cleaning up of the **MODEL XXT 42** is a **VERY IMPORTANT** operation. This function will set the stage as to how well the unit will perform the next time it is used. The clean-up involves the removal of unpumped concrete remaining in the hopper, swing tube, material cylinders and delivery system piping.

**CLEANING THE SYSTEM**

- When blockage has been cleared **START** pump, placing **DIRECTION** switch to **FORWARD**. Pump the material at a **LOW VOLUME** until material flows steadily out the end hose.
- Open the clamp in the area of the blockage and clear the pack.

*Extreme caution must be exercised when opening the clamping devices on any part of the delivery system. The possibility may still exist that there is still some pressure trapped in the line.*

**WARNING**

- Warn all personnel in the immediate area of the imminent **DANGER** and to stay clear of the area.
- Make sure those assigned to clear the blockage are fitted with **EYE PROTECTION** before they open the clamping device.

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**





*If once is GOOD.....twice is BETTER. Running a second sponge ball through the delivery line will ensure a thorough cleaning.*

**NOTE**

- All the concrete material is to be pumped from hopper down to the level of the top of the material cylinders.
- Stop the **FORWARD** direction of pumping and switch direction to **REVERSE**. Pump in this manner for about 3-4 strokes. Turn the pump **OFF**.
- Position the boom, operating the controls, so that each section is raised to produce a relatively straight in line configuration and the entire structure has a gradual ascending position.
- Insert into the end of the tip hose a **WATER SOAKED** sponge ball. Make sure it is firmly pressed into hose.
- With pump **DIRECTION** switch in **REVERSE** position, **START** pump. This will cause the sponge to be sucked back through the delivery piping toward the hopper. **REMEMBER LOW SPEED - LOW VOLUME.**
- With a hammer lightly tap on the delivery transfer line just ahead of the elbow at hopper (toward boom). Continue to tap until a hollow sound is heard. This indicates that the sponge ball has passed the area being tapped.
- Wait a minute or so to allow the material and sponge ball to be sucked back into the hopper. Using manual switch, shift swing tube to opposite direction. Place **DIRECTION** switch to **FORWARD** position and pump until sponge ball can be retrieved from cylinder.

**SUCTION CLEANING**

**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**





- Pump all the remaining material from the hopper. Place **DIRECTION** switch in **REVERSE** and pump 2-3 strokes to relieve any pressure in the delivery line.
- With pump turned **OFF** open the hopper drain and remove any remaining concrete.
- Using spray hose thoroughly wash down the inside of the hopper and the inside of the material cylinders.
- Close the hopper drain and fill the hopper with water. Leave hose run inside hopper
- Open discharge elbow and insert two (2) or three (3) **WATER SOAKED** sponge balls into transfer tube. Replace elbow and lock in place.
- Place **DIRECTION** switch to **FORWARD** and start pumping. This will push the water and sponge balls up through the delivery line cleaning out any remaining material. Keep **SUFFICIENT** water in the hopper.

**WATER PRESSURE CLEANING**

- Open the discharge elbow and place water hose with spray nozzle attached, set to create some water pressure, inside the outlet. Feed the hose down into the S-tube being careful not to go all the way through the S-tube.
- Remove hose and close discharge elbow and put some water inside hopper. Turn pump **ON** and pump in **REVERSE** for a few strokes to enable the flushing of the material cylinders.
- Turn pump **OFF**. Drain hopper and water box and wash and clean up outside of machine.

*The control for operation of the water pump is located on the curb side behind the hopper adjacent to the AGITATOR control.*

**NOTE**

- If a second cleaning is to be made, do so as previously described and outlined.
- Remove any remaining concrete by opening hopper drain and washing the inside of the hopper using the water hose.



**XXT42 TRUCK - MOUNTED  
CONCRETE BOOM PUMP**

# XXT42 TRUCK - MOUNTED CONCRETE BOOM PUMP



## PREPARE UNIT FOR TRAVEL

- When the sponge balls come out the tip hose the pump can be stopped.
- Increase the slant of the boom structure slightly. Place **DIRECTION** switch to **REVERSE** and pump for several strokes to allow the cleaning water to flow out of boom.
- Turn pump **OFF**. Open hopper drain to remove any remaining water and concrete. Clean the rest of the machine. Drain the water box.

Having done the distasteful job of clean-up, you can now ready the unit for the trip home.

- Using the appropriate controls, proceed to fold or lower each boom section, starting with section "D". Do not lower main "A" boom unless it is already over rear of chassis.
- Rotate boom structure so that boom is positioned over rear of chassis. Align so that boom will be centered on chassis and proceed to lower boom down onto travel rest.

- Disengage lock pin on telescoping leg and using the controls at the outrigger panel either right or left side **RETRACT** outrigger jacks, and legs. Front telescopic leg must be fully retracted to enable swing out leg to be completely swung in.

- Pick up auxiliary jack pads and any cribbing joist that were used and place in proper storage area. Engage lock pin at underside of rear swing out leg.

- De-energize the remote control panel turning key **OFF**. Disconnect the remote cord from the connection on the chassis panel and place remote control in a secure location.

- Pick up and store any wheel chocks, cones and other equipment
- In chassis cab, engage clutch pedal, shift transmission to **NEUTRAL** then place **PTO** switch in **OFF** position.

# D R I V E S A F E L Y