

# Operating and Service Manual



## Riding Adzer

(Serial Number ADZ-140-08 and Higher)



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## Safety Precautions and Devices

Before operating the Riding Adzer, perform a daily inspection of the machine as described in Section 4. Ensure that all general safety precautions are observed and that proper personal protective clothing is worn as described below.

Personal Protective Equipment: At a minimum, the following Personal Protective Equipment should be worn by the operator:

1. Safety Glasses
2. Hearing Protection
3. Safety Helmet
4. High Visibility Safety Vest
5. Leather Work Gloves
6. Steel Toed Safety Shoes

## Transportation & Handling

Depending upon circumstances, the Riding Adzer may be lifted and set onto the rail with a crane or driven onto the rail.

Lifting with a Crane: When lifting, remove any tie downs. Lift the machine clear of the truck / rail car and place it on a safe surface.

**WARNING!** Before lifting, ensure that the crane and the surface it operates on can support the load. (See Section 1 "Physical Data" for weight)

**WARNING!** Only lift from the lift bale. *Do not lift from the work tool arm.*

**WARNING!** ALWAYS use handling lines when lifting and maintain a safe distance away from the machine whenever lifted with a crane.

Towing on track: Hitch points are welded to the frame below each bumper. They are used for towing the machine on-track. Prepare for on-track towing as follows:

1. Install the tow bar between both machines.
2. Release the parking brakes on the towed machine.
3. If towing, a depressurized or malfunctioning air system, mechanically release the "fail-safe" brakes before towing the machine.
4. Exercise caution when towing, operate the towing machine at safe speeds and allow extra stopping distance when towing another machine.
5. Upon arrival, mechanically apply the parking / "fail-safe" brakes on the towed machine.
6. Disconnect the tow bar from both machines.

**WARNING!** Ensure that a tow bar is properly installed between the towed and towing machines before releasing the parking brake or mechanically releasing the "fail-safe" brakes. Ensure that the parking / "fail-safe" brakes are reapplied before the tow bar is disconnected.

**Caution!** Do not tow the machine in excess of 20 mph (32 km/h).

**Note:** A manual hydraulic hand pump is provided to raise the workhead(s) in the event of an engine or hydraulic pump failure.

**Note:** Quick disconnect air fittings are provided, and can supply air from one machine to another, to release the "fail -safe" brakes for emergency towing in the event of an engine or air compressor failure. If the air system has been damaged, the brakes can be mechanically released.



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## Section 3 Operating Procedures

### Mechanical Data:

Engine Speed:	2,400 RPM
Engine Oil Pressure:	15 - 60 psi (0.9 - 3.0 bar)
Low Oil Press Shut-down:	10 psi (0.7 bar)
Engine Oil Temp:	140-160°F (60-71°C)
High Cyl Temp Shut-down:	350°F (~177°C)
Hydraulic Max Pressure:	1000 psi (~69 bar)
Hydraulic Pressure filter:	850 psi (~59 bar)
Hydraulic Oil Temp:	140-160°F (60-71°C) 180°F (~82°C) Max

### **Normal Starting Procedures**

Before starting the engine, perform a daily inspection (see Section 2).

### Prestart Check:

- Engine oil level
- Hydraulic fluid level
- Engine fuel level
- Air tank vent valve – closed
- Parking brake set - knob pushed in to set brakes

Engine Starting Procedures: See the engine operator's manual provided separately in the logbook storage box for detailed starting and operating instructions.

1. Check / close air reservoir drain valve and emergency stop button on the control panel.
2. Pull the *Hydraulic Dump Valve* into the startup mode (see Figure 3-2).
3. Lower the gauge guard onto the storage pins, located under the guard.
4. Rotate *Battery Master Switch* to "ON."
  - a. The low air pressure buzzer will sound if pressure is below 70psi (4.8 bar).
  - b. The flashing red light and beeping alarm on the engine control box will operate whenever the *Battery Master Switch* is "ON" and the engine is not running.
5. Check parking brake set. (Push parking brake knob in to release air pressure)
6. Rotate Throttle lever to "IDLE."
7. If air temperature is less than 40°F (5°C) use glow plugs as follows:
  - a. Rotate ignition switch to "RUN."
  - b. Depress & hold *GLOW PLUG* switch on engine control box until green *GLOW PLUG* light illuminates. (~ 5 - 10 seconds)
8. Depress and hold the "*Tattletale*" safety switch while rotating the ignition switch to "START." Adjust throttle as necessary to start engine. When engine starts, release the ignition switch to "RUN" and continue to depress the "*Tattletale*" safety switch until engine oil pressure reaches 20 psi.
9. Release "*Tattletale*" safety switch. If engine quits, repeat steps 4 - 7 and increase throttle setting as required until the engine runs when the "*Tattletale*" is released.
10. Operate the engine with the *Ignition Switch* in the "RUN" position. Allow engine to warm-up before increasing throttle to full speed.
11. Set hydraulic system bypass valve closed to tank.

***Caution!*** Do not continuously operate starter for more than 20 seconds. Wait 60 seconds between starting attempts. If engine does not start after 3 attempts, identify and repair the malfunction.



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