

20T Hydraulic Raising System Product Manual

AFS 350- 400- 600



ARE Structures

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Contents



1. Power Unit:12v motor, gear pump, control block with solenoids and reservoir tank
2. Hydraulic hoses with hydraulic couplers on the ends
3. Cables with clamps to connect to power source
4. Pendant remote with buttons for up and down functions
5. Carrying tote housing

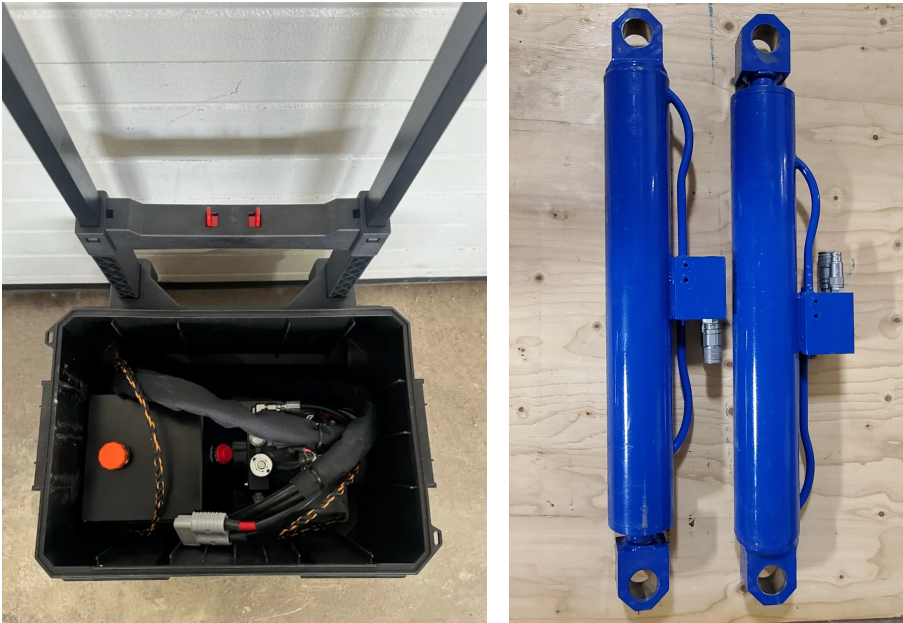
Pre-Operation Inspection

- Fully inspect tote in which components are contained.
 - There should be no oil visible in tote
 - The pump and motor are secured in tote
 - Inspect any cracks, dents, or damages to tote**If any of these issues are present, please reach out to an ARE representative.**
- Hydraulic Components
 - Confirm that the breather and/or filler caps/plugs are in tact
 - If the reservoir has any dents, holes, or leaking, contact ARE
 - Validate that the fittings and connections are tight, bent, leaking, or broken
 - No hoses are cracked, nicked, pinches, or leaking should take place
 - Quick couplers are clean, and free of damage
- Electrical Components
 - The clamps and cables going to the power source do not have any cuts, damaged clamps, or loose at connection
 - Look for any wires unplugged and wires pulled out of terminal
- Fluid Check
 - Clean breather cap and area before removing cap
 - Remove breather cap and confirm hydraulic fluid is level
 - If filling is necessary, add recommended hydraulic oil
 - Oil should be red or clear if it has a milky look, then there is water in it and needs to be changed.
 - Do NOT run with water in the oil. Contact ARE to get different cylinders and power unit if this occurs.

First Time Use

- Locate and remove red reservoir cap.
- Check sticker on reservoir for recommended oil type.
- Using a clean funnel, slowly pour hydraulic oil into reservoir until the level reaches 1.5" to full. Do not overfill, check level with dipstick or side gauge.
- Securely tighten the reservoir cap.
- Connect ram to the power unit and the power unit to a 12v battery.
- Without any load, complete a full test cycle (full extension and retraction) while checking for smooth operation.
- If operation is not smooth, there might be air trapped in the lines. Fully extend and retract 3-5 times to get rid of any trapped air.
- Perform pre-operation steps and proceed to use ram on your tower as needed.

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20T RAM (includes 2 Pins) and 12 Battery Power Unit

Applicable AFS Systems

AFS System	Pole Weight /lbs	Maximum Additional Payload /lbs	Ram Qty	Power Unit
AFS 350_40' Pole	1144	594	1	BPU
AFS 400_50' Pole	2409	1265	2	BPU
AFS 600_60' Pole	2549	440	2	BPU

Ram Specifications (HY-20T)

Overall dimensions: L42.1" x W11" x H4.5"

Cylinder dimensions: 4.0" Bore, 20.27" Stroke, 2.00" Rod

Pins dimensions: L5.90" x D1.96"

Weight: 95 lbs per ram

Power Unit Specifications (BPU-5T-20T)

Overall dimensions: L20.5" x W13.5" x H12"

Voltage: 12V

Reservoir: 3 liters

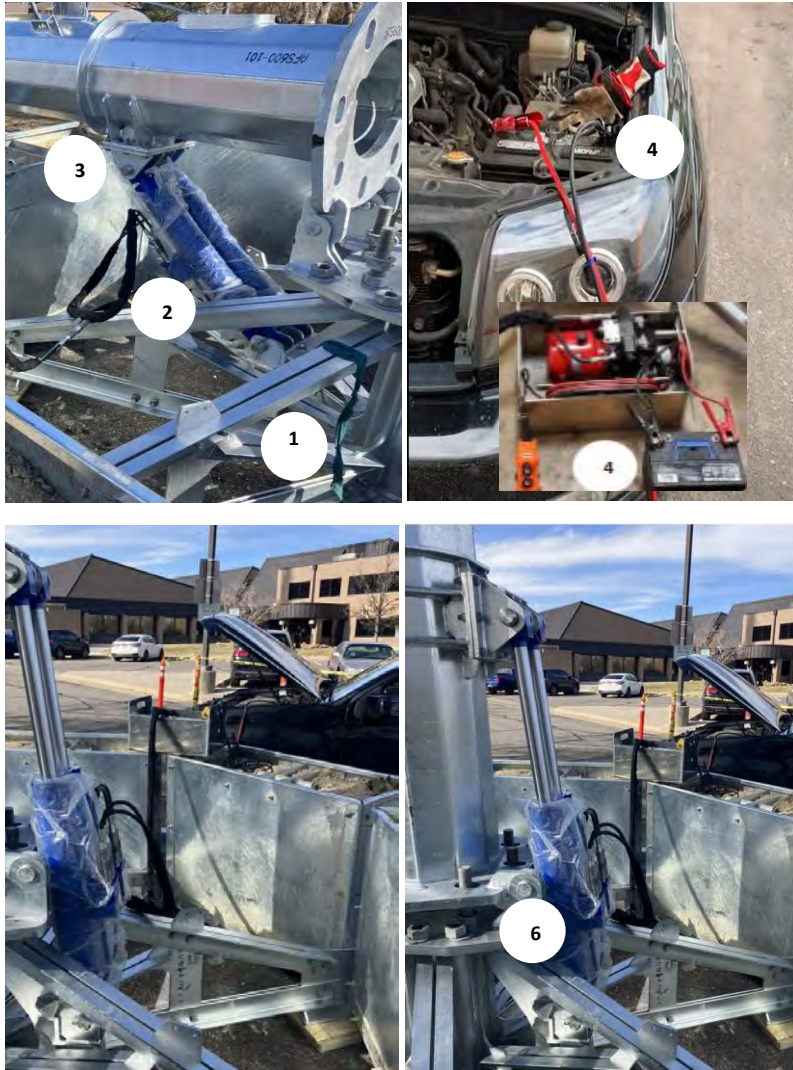
Recommended Hydraulic Fluid type: ATF

Power & Ground Cable: 4 ft

Paired Hoses length: 7 ft

Weight: 60 lbs

Installation Steps



Follow the installation steps below;

- Fully assemble foundation
 - Torque bolts to specification
 - Add required ballast to ballast trays
 - Confirm power unit is operated on level surface
 - Connect hoses to ram or rams (1)
 - Pin ram to lower splice plate (2)
 - Push couplers to connect. You will hear a click when they are connected
- NOTE: Twin rams connect the T-Hose set to rams from each end of the set. The center of couplers will connect to the power unit hoses.**
- Leave pole in horizontal position and pin top of ram (3)
 - Connect battery terminal clamps to battery (4)
 - Raise first pole section to ensure ram is operating properly and anchor bolts aligned with base flange
 - Lower pole and complete assembly of pole
 - After pole is raised, add top nuts to top of pole base flange (6)
 - Remove ram and pins from pole
 - Use nuts to level pole

Note: If you encounter that a coupler will not push together, relieve the trapped pressure at the push connect couplers by following the method below.

1. Use a blunt, smooth tool or object that will fit to the male coupler tip
2. Depressing the disc will release a few drops of hydraulic fluid and release the trapped pressure to push to connect the couplers

Packaging / Shipping

Shipping Crate for Ram & Power Unit



Maintenance

Notes

- Do not use any other power units with ARE rams. ARE rams should only be used with ARE power units.
- Do not overload pole to exceed ram capacity. See table on page 1 for maximum payload

Maintenance Guide

Ram

- Store ram system in a safe and dry place away from moisture
- Inspect lubrication regularly
- Keep oils clean and uncontaminated
- Regularly check cylinder and rod for corrosion and uneven wear. This indicates dampness or moisture
- Rams are to be operated every month
- Rams should be stored in a vertical position or rotated 180 degrees every 3 months

Maintenance Guide

Power Unit

- Store system in a safe and dry place away from moisture
- Maintain hydraulic fluid levels

Dimensions: 50" x W42" x 21"

Weight: 285 pounds

If one of the following happens during pole raising, please follow the troubleshooting instructions below:

- Ram operates sporadically or not at consistent speed or ram stalls during raising

Troubleshooting Instructions

1. Lower Pole, resting on pedestal/saw-horse or other, to relieve load on ram
2. Disconnect the lines from the cylinder
3. Check oil level in reservoir. If below 1.5" from top, add fluid – Dexron III ATF
4. Reconnect the hydraulic lines to the cylinder. Do not connect the cylinder to the device/pole at this time.
5. Completely cycle the cylinder one time, fully retracted to fully extend and back to fully retracted.
6. Check the oil level in the reservoir again, and add if needed to get the oil level within 1.5" of the inside of the fill hole.
7. Completely cycle the cylinder again, fully retracted to extended and back to fully retracted.
8. If oil level is not within 1.5" of the top of fill hole, add oil and repeat cycling the ram until oil level remains at 1.5" below fill hole when ram is retracted.

-Pump gets hot or motor stalls with pole partially raised

Troubleshooting Instructions

1. Stop operation of ram, leave pole in current position
2. Allow motor to cool
3. Lower pole onto pedestal or pole support and disconnect hydraulic lines and cables from battery
4. Verify weight does not exceed ARE's stated maximum weight raised in addition to the pole
5. Check electrical cables to motor, ensure good connection to motor
6. If weight is within specifications and no connection issues are discovered, call ARE Telecom Support @ 651-330-1263

Troubleshooting Ram

- Using a 22mm wrench, turn counter clockwise 3/4 turn, or until pressure is released
- Make connection, then tighten

