



TA Instruments

Packing the ARES Instrument

This procedure will cover the steps to properly pack up the ARES for shipment.

Packing Materials Provided:

Standard

Shipping carton
Shelf for oven
Box for accessories
Oven/motor foam
Skid
3 Screws hold RSA to skid
4 Z-brackets w/ screws
Shoulder bolt

LS

Shipping carton
Shelf for oven
Box for accessories
Oven/motor foam
Skid
3 Screws hold RSA to skid
4 Z-brackets w/ screws
Shoulder bolt
LS motor lock bracket

Tools Required:

Complete set of metric Allen Keys
Adjustable wrench
Complete set of standard Allen keys
Set of screwdrivers
Stretch wrap
Strapping kit
Heavy duty lifting jack
Cart

NOTE: Before attempting to ship ARES instrument, please be sure all the front and back panels are well screwed in position. ARES test station is about **275 lbs.**, enough manpower and adequate tools are required.

- 1.) Clean air should be flowing through the instrument with the appropriate PRESSURE as indicated on the right hand side of the instrument (Figure 1).

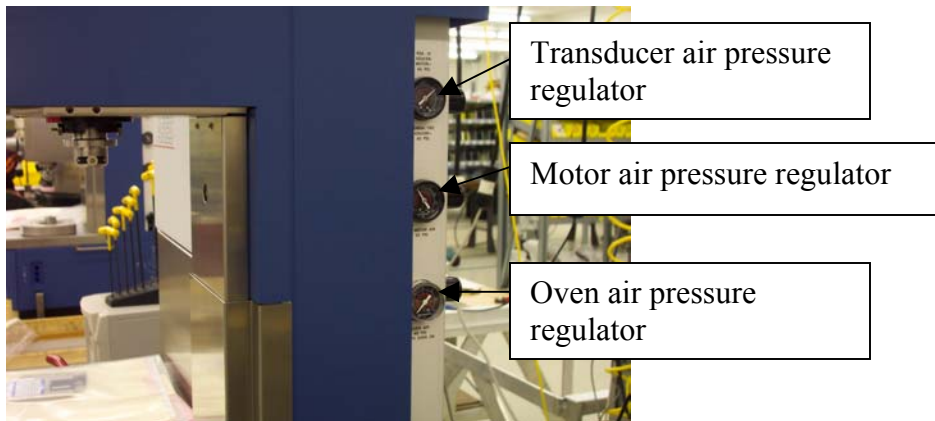


Figure 1



Stage lock screw

- 2.) Get the stage Lock Screw and 4mm Allen key ready.
- 3.) Slide the oven to the extreme left.
- 4.) Switch ON the instrument and open Orchestrator Software on the host computer: Move the stage up OR down slowly to the position where the outer hole below the transducer corresponds with the inner hole (Figure 2).



Figure 2

- 5.) Insert the stage lock screw into the corresponding holes and tighten the screw carefully using 4mm Allen key.
- 6.) Switch OFF the instrument.

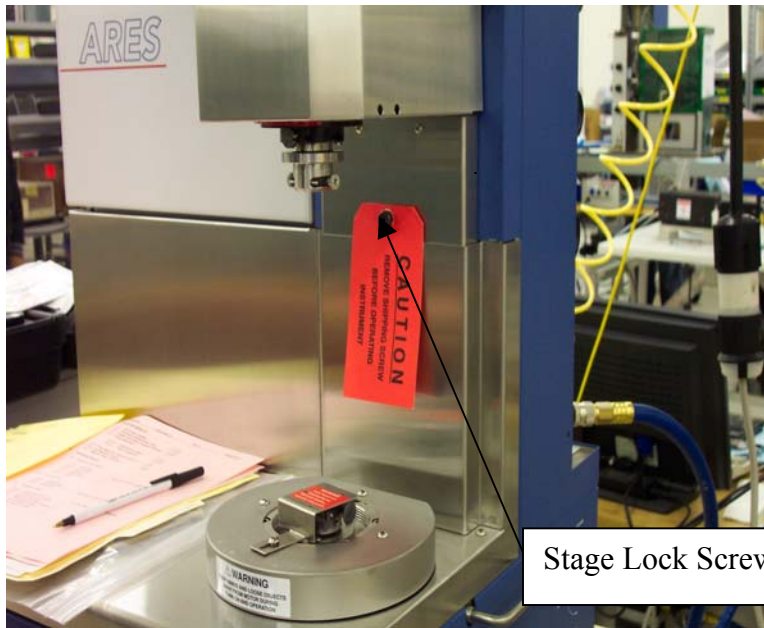


Figure 3

- 7.) LOCK TRANSDUCER. If the transducer is FRT, slide the lock pin and confirm that transducer is locked (Figure 5).
- 8.) Remove tools from transducer and Servo Motor tool holders. Tighten thumbscrews securely.
- 9.) LOCK the Servo Motor if it is LOW SHEAR Option (AIR BEARING MOTOR). If it is a Standard ARES Motor (BALL BEARING) go to step # 13.
- 10.) Remove one of motor cover screws using 3mm Allen key.
- 11.) Place Spindle Lock Bracket on the LS motor. Set 3 holes on the bracket to correspond with screw holes on the spindle. Using 2.5mm Allen key, tighten bracket to the spindle with 3 screws provided (Figure 6).
- 12.) Turn the LS Motor spindle gently to match the hole at the end of the bracket with a motor cover screw hole. Use the loosened motor cover screw and tighten the bracket down using 3mm Allen key (Figure 6).

Unlocked Transducer

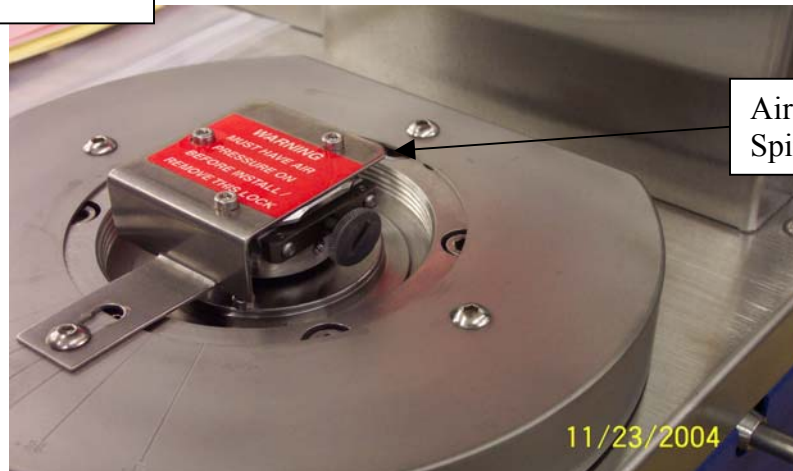


Figure 6

- 13.) Place foam disk on motor. The purpose is to sandwich the foam disk between the motor and oven. If the instrument does not have oven option, go to step #15.
- 14.) Move the oven gently to extreme right and lock the oven door securely.



Figure 7

- 15.) Carefully turn back of ARES Instrument towards you at about a 30 degrees angle. Do not stretch cables and hoses.

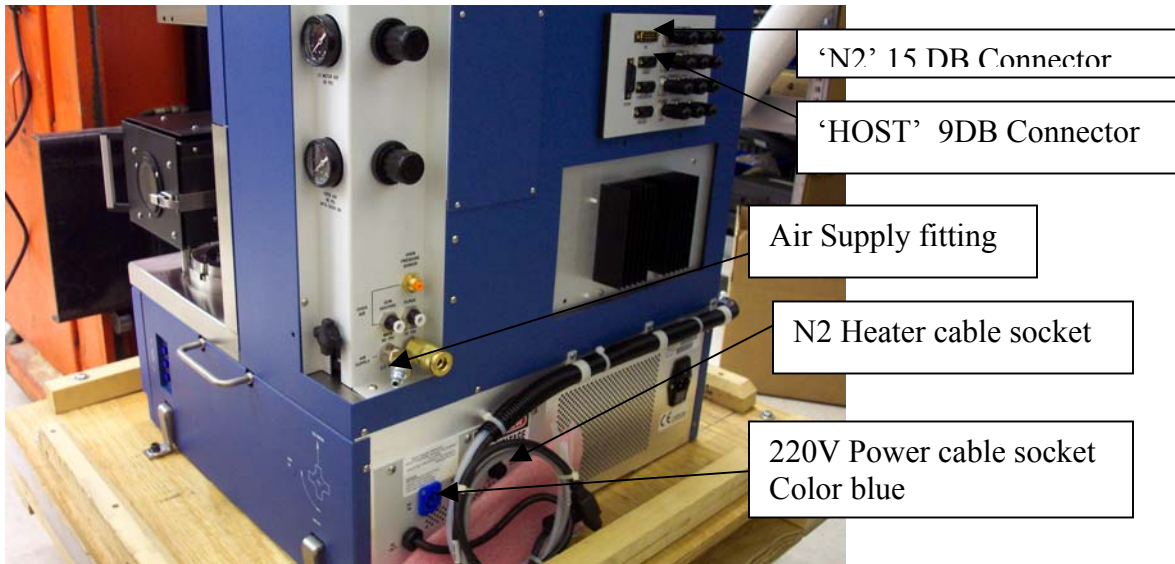


Figure 8

- 16.) Remove power cable from 220 Volt supply socket.

- 17.) Remove any Air Hoses connected to air fittings.
- 18.) Remove communication cable from 'HOST' 9DB Connector.
- 19.) Remove LN2 Control cable from 'N2 Heater' and 'N2' 15 DB Connector if applicable.
- 20.) Using the appropriate equipment, Cart and lifting tool, move the ARES INSTRUMENT from Laboratory workbench to shipping Department.

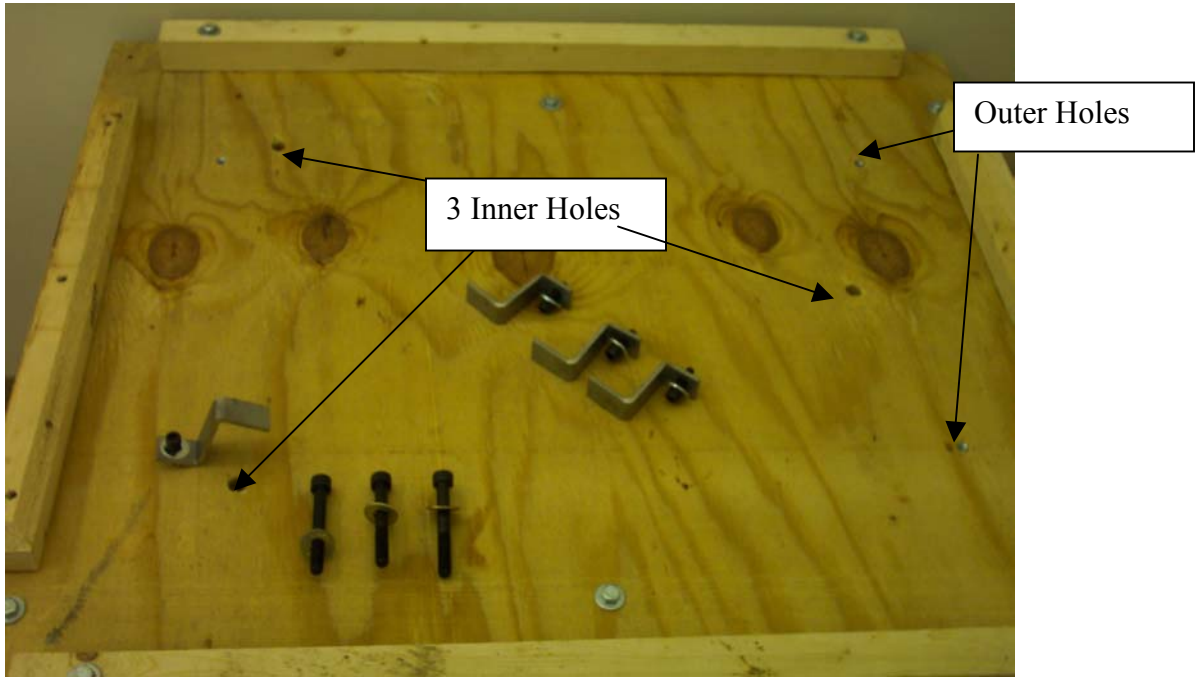


Figure 9

- 21.) The Pallet caddy has seven holes on it; the three inner holes are for bolting down the instrument from under the pallet, using the 3 metric Socket-head Cap Screws-M10 (Figure 9). The four outer holes with embedded threaded nuts are for bolting down the instrument with four Hold down Z-Brackets and standard short socket-head cap screw
 - a. There are 2 types of Hold down Z-Brackets.
 - i. Short Hold down Z-bracket 2.05 Inches - **ARES Standard**
 - ii. Long Hold down Z-Bracket 3.43 Inches - **ARES LS**
 - b. M 10 Socket-head Cap Screws are of 2 types;
 - i. Socket Cap Screw M10 x 1.5 x 75mm Long - **ARES Standard**
 - ii. Socket Cap Screw M10 x 1.5 x 100mm Long - **ARES LS**
- Important: ARES versions 1 to 5 and 15 do not use Z- brackets. Use strapping kit instead**
- 22.) Carefully lower the Instrument on Pallet caddy. Place the instrument on pallet so that 2 of the inner holes are on your left hand side (Figure 9).
- 23.) Insert the M10 Socket cap screw with washer in the right hand side hole under the pallet (Figure 10). Set the hole to correspond with the threaded hole under the instrument and turn the bolt to ensure that it catches the threading. On the left hand side under the pallet there are 2 holes. Set the 2 holes under the pallet to correspond with the 2 threaded holes under the instrument, insert two M10 Socket cap screws with washers, and turn the bolts to ensure that they catch the threading. Once it is confirmed that all the 3 bolts are on the instrument, tighten the bolts slightly with 8mm Allen key. Do not over tighten at this point.



Figure 10

- 24.) Insert the 4 Hold down Z-Brackets in the 4 slots on the sides on the instrument (Figure 11). Use the 4 short standard Socket-head screws with washers to secure the hold down Z-brackets on the instrument and bolt them down carefully on the pallet with ¼” standard hex keys. Do not over-tighten the screws on the pallet so as not to damage the embedded threaded nuts in the pallet.

**Important: ARES versions 1 to 5 and 15 do not use Z- brackets.
 Instead secure instrument to pallet with strapping kit. Run 2 straps
 over top of instrument through the 4 outer holes.**

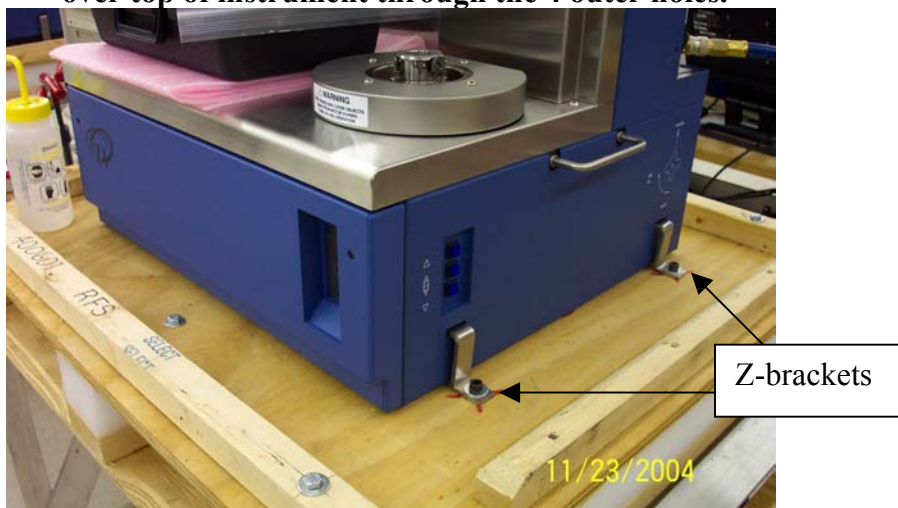


Figure 11

- 25.) At this point, tighten M 10 Socket-head cap screws under the pallet securely.
- 26.) Wrap corrugated -foam shipping shelf on the Oven (Figure 12). Pack all accessories, cables and hoses into corrugated carton. Seal the box with heavy- duty tape.



Figure 12



Figure 13

- 27.) Place the carton filled with accessories on top of wrapped oven (Figure 12). If your instrument is not equipped with an oven (Figure 13).
- 28.) Stretch Wrap Instrument:
Wrap the stretch plastic firmly around the Instrument several times from the base to top.
Ensure that there is no loose object on the pallet (Figures 14).



Figure 14

- 29.) Open corrugated carton and cover the ARES Instrument on the Pallet.
- 30.) Use heavy-duty tape to seal the box.
- 31.) Strap the box tight and secure on the pallet with the appropriate strapping tool and materials (Figure 15).



Figure 15

- 32.) DO NOT STACK anything on top of ARES.
- 33.) Your instrument is now ready to ship.

PLEASE CONTACT SERVICE DEPARTMENT IF FURTHER CLARIFICATION ON HOW TO PACKAGE SPECIFIC ACCESSORIES.

TA Instruments strongly recommends using a Motor Freight Carrier!