

# Inspecting Brasswinds for Repair

Thoroughness when inspecting incoming brasswinds for repair cannot be overemphasized. Often, contacting a customer to inform them of repairs that extend beyond the estimate previously given can negatively impact customer confidence and satisfaction.

For your customers, be certain to distinguish between what is defined as a “*play condition repair*” and an “*overhaul*”:

**PLAY CONDITION REPAIR:** *Only those repairs necessary to bring an instrument into good playing condition.* This includes chemical flushing, replacement of damaged parts, dent removal, soft soldering, and any spot finishing (lacquering or plating) deemed appropriate where lacquer is blushed or burned or where plating has been tinned with soft solder.

**OVERHAUL:** *The complete reconditioning of a brasswind, including refinishing (lacquer or plating).* In an overhaul, the instrument is stripped of the existing finish (the exception being silver plating), damaged parts are replaced, the instrument is completely buff (polished), degreased, and re-lacquered or plated. Valve re-fitting is often done at this time as well. The cost of overhauling generally starts at approximately \$300.00 for trumpets and go up from there.

Use the guides below to inspect trumpets/other piston brasswinds, trombones, and french horns/rotary valve brasswinds. Always note every repair to be performed on your repair tags – exclude nothing.

Use the sample tags and sample invoices that follow to assist you in documenting all needed repairs:

## Piston Brass Inspection Sheet

### Overall Instrument Condition

- Yes/No** Has the instrument been well cared-for?  
**Yes/No** Are books and extraneous items causing harm to the instrument?

### Mouthpiece

- Yes/No** Is it stuck in the receiver?  
**Yes/No** Missing plating in the bowl and on the rim  
**Yes/No** Splits in the shank  
**Yes/No** Condition of the rim – pits and gouges mean a new mouthpiece  
**Yes/No** Plier marks  
**Yes/No** Worn shank – does it still fit the receiver or bottom out against the mouthpipe?  
**Yes/No** Interior debris build-up – does the customer need a mouthpiece brush?

### Straightness and Alignment of Parts

- Yes/No** Bent mouthpipe? - Sight mouthpipe in top and side plane  
**Yes/No** Bent bell? - Sight bell in top and side plane  
**Yes/No** Body alignment? - Sight across main tuning slide tubes for parallel

### Main Tuning Slide and Valve Slides

- Yes/No** Are they stuck? – corrosion or dents causing the stuck slide?  
**Yes/No** Interior Condition – does the instrument need a chemical flush?  
**Yes/No** Crook Dents – which need to be removed?  
**Yes/No** Slide tube dents – was the slide dropped?  
**Yes/No** Split tubes?  
**Yes/No** Rotted Tubes?  
**Yes/No** Are the valve slides working freely? - valve slide alignment or tube dents?  
**Yes/No** Is the player lubricating the slide often enough and with the appropriate lube?

### Waterkeys

- Yes/No** Hinge tube solder joint broken?  
**Yes/No** Bridge and nipple solder joints cracked or tearing?  
**Yes/No** Broken springs?  
**Yes/No** Springs wrapped around the waterkey bridge?  
**Yes/No** Frozen/seized Amado waterkeys?

### Valve Caps

- Yes/No** Are they stuck?  
**Yes/No** Are they cross-threaded?  
**Yes/No** Plier damage?

### Red Rot

- Yes/No** Is it present?  
**Yes/No** How severe is it? Are there black centers to the spots? –  
if so, a new part is recommended  
**Yes/No** Bubbled plating? – indicates red rot underneath

### Pistons

- Yes/No** Valve stem travel – does it center in the top cap hole?  
**Yes/No** Stuck valve stems?  
**Yes/No** Fused Aluminum stems?  
**Yes/No** Stretched valve springs?  
**Yes/No** Worn/sheared valve guides?  
**Yes/No** Plating wear?  
**Yes/No** Bubbled plating? – indicates red rot  
**Yes/No** Has the piston been sanded or polished?  
**Yes/No** Is it bent?  
**Yes/No** Is it out-of-round?  
**Yes/No** Are tolerances within specs?  
**Yes/No** Is the player oiling often enough?  
**Yes/No** Is crosshatch inhibiting valve action?  
**Yes/No** Is high surface grain inhibiting valve action?  
**Yes/No** Improper rotational alignment? – view through valve slides to inspect

### Casings

- Yes/No** Is there damage that is inhibiting valve action?  
**Yes/No** Dents?  
**Yes/No** Stressed slide/bell knuckles?  
**Yes/No** Valve slide alignment?  
**Yes/No** Bent bell bow or stem?  
**Yes/No** Bent or damaged baluster?

### Soft Solder Joints

- Yes/No** Broken flanges?  
**Yes/No** Broken socket joints?  
**Yes/No** Cracked or broken contact joints?  
**Yes/No** Broken/leaking ferrule joints?  
**Yes/No** Super glue? – extra charge for removing super glue  
**Yes/No** Epoxy? – extra charge for removing epoxy

### Dent Work

- Note all dents that are to be removed
- Be specific to the part or to the area (see sample tag and invoice)

### Case

- Inspect and repair anything that will potentially harm the instrument:
  - Condition of hinges
  - Condition of latches/striker/hasps
  - Separated corners and edges (finger joints)
  - Loose or inadequate case blocking (nest)
- Yes/No** Inadequate mouthpiece storage – can the mouthpiece get loose?

## Trombone Inspection Sheet

### Overall Instrument Condition

- Yes/No** Has the instrument been well cared-for?  
**Yes/No** Are books and extraneous items causing harm to the instrument?  
**Yes/No** Inspect the condition of the hand slide/bell connection – too loose?

### Mouthpiece

- Yes/No** Is it stuck in the receiver?  
**Yes/No** Missing plating in the bowl and on the rim?  
**Yes/No** Splits in the shank?  
**Yes/No** Condition of the rim?– pits and gouges mean a new mouthpiece  
**Yes/No** Plier marks?  
**Yes/No** Interior debris build-up? – does the customer need a mouthpiece brush?

### Straightness and Alignment of Parts

- Yes/No** Bent gooseneck? - inspect for straightness within itself **and** for proper alignment with the bell stem.  
**Yes/No** Bent bell? - Sight bell in top and side plane  
**Yes/No** Body alignment? - Sight across main tuning slide tubes for parallel

### Waterkeys

- Yes/No** Hinge tube solder joint broken?  
**Yes/No** Bridge and nipple solder joints cracked or tearing?  
**Yes/No** Broken springs?  
**Yes/No** Springs wrapped around the waterkey bridge?

### Red Rot

- Yes/No** Is it present?  
**Yes/No** How severe is it? Are there black centers to the spots? – if so, a new part is recommended  
**Yes/No** Bubbled plating? – indicates red rot underneath

### Soft Solder Joints

- Yes/No** Broken flanges?  
**Yes/No** Broken socket joints?  
**Yes/No** Cracked or broken contact joints?  
**Yes/No** Broken/leaking ferrule joints?  
**Yes/No** Super glue? – extra charge for removing super glue  
**Yes/No** Epoxy? – extra charge for removing epoxy

### Dent Work

- ❖ Note all dents that are to be removed
  - ❖ Be specific to the part or to the area (see sample tag and invoice)
- Yes/No** Main tuning slide crook dents? - new crook?

### Handslide Repairs

- Yes/No** Are the outer tubes straight?  
**Yes/No** Are the inner tubes straight?  
**Yes/No** How many dents need to be removed from the outer handslide?  
**Yes/No** How many dents need to be removed from the inner handslide?  
**Yes/No** Are there dents in the cork barrel?  
**Yes/No** Does the handslide need chemical flushing?  
**Yes/No** Does the crook need to be removed for replacement or dent removal?  
**Yes/No** Does the crook need to be removed to facilitate the handslide repair?  
**Yes/No** What is the condition of the inner slide plating?  
**Yes/No** Is the slide lock lug bumping the cork barrel  
**Yes/No** Is the handslide angle coming out of the bell correct – does the handslide have proper clearance at the bell rim?  
**Yes/No** Is the venturi red rotted?  
**Yes/No** Is the venturi still soldered in place?

### F-Attachment Repairs/Adjustments

- Yes/No** Does the rotor require spindle bearing and end play slop removal?  
**Yes/No** Loose bearing plates?  
**Yes/No** Does tightening the valve cap seize the rotor?  
**Yes/No** Does the linkage require repairs/adjustments?  
**Yes/No** Burred string holes in the lever arms?  
**Yes/No** Burred string screw heads?  
**Yes/No** Loose stop arms?  
**Yes/No** Bent rotor spindles?  
**Yes/No** Improperly strung?  
**Yes/No** Does the handslide-connecting socket require straightening?  
**Yes/No** Does the handslide-connecting socket require reinforcement?

### Case

- ❖ Inspect and repair anything that will potentially harm the instrument:
  - ❖ Condition of hinges
  - ❖ Condition of latches/strikers/hasps
  - ❖ Separated corners and edges (finger joints)
  - ❖ Loose or inadequate case blocking (nest)
- Yes/No** Inadequate mouthpiece storage – can the mouthpiece get loose?

## F Horn/Rotary Valve Brasswind Inspection Sheet

Yes/No

### **Overall Instrument Condition**

**Yes/No** Has the instrument been well cared-for?

**Yes/No** Are books and extraneous items causing harm to the instrument?

### **Mouthpiece**

**Yes/No** Is it stuck in the receiver?

**Yes/No** Missing plating in the bowl and on the rim?

**Yes/No** Splits in the shank?

**Yes/No** Condition of the rim? – pits and gouges mean a new mouthpiece

**Yes/No** Plier marks?

**Yes/No** Interior debris build-up? – does the customer need a mouthpiece brush?

### **Straightness and Alignment of Parts**

**Yes/No** Bent mouthpipe? - Sight mouthpipe in top and side plane

**Yes/No** Body alignment? - Sight across all slides for parallel

### **Main Tuning Slide and Valve Slides**

**Yes/No** Are they stuck? – corrosion or dents causing the stuck slide?

**Yes/No** Interior Condition – does the instrument need a chemical flush?

**Yes/No** Crook Dents – which need to be removed?

**Yes/No** Slide tube dents – was the slide dropped?

**Yes/No** Broken spanner braces? – common on French horn

**Yes/No** Split tubes

**Yes/No** Rotted Tubes

**Yes/No** Are the valve slides working freely? - valve slide alignment or tube dents?

**Yes/No** Is the player lubricating the slide often enough and with the appropriate lube?

### **Waterkeys**

**Yes/No** Hinge tube solder joint broken?

**Yes/No** Bridge and nipple solder joints cracked or tearing?

**Yes/No** Broken springs?

**Yes/No** Springs wrapped around the waterkey bridge?

**Yes/No** Frozen/seized Amado waterkeys?

### **Valve Caps**

**Yes/No** Are they stuck?

**Yes/No** Are they cross-threaded?

**Yes/No** Plier damage?

**Yes/No** When tightened, does the rotor seize

### **Red Rot**

**Yes/No** Is it present?

**Yes/No** How severe is it? Are there black centers to the spots? – if so, a new part is recommended

### **Soft Solder Joints**

**Yes/No** Broken flanges?

**Yes/No** Broken socket joints?

**Yes/No** Cracked or broken contact joints? –pervasive on many French horns.

**Yes/No** Broken/leaking ferrule joints? – common at the rotor casing

**Yes/No** Super glue? – extra charge for removing super glue

**Yes/No** Epoxy? – extra charge for removing epoxy

### **Dent Work**

**Yes/No** Note all dents that are to be removed

**Yes/No** Be specific to the part or to the area (see sample tag and invoice)

**Yes/No** Damage to detachable bell rings?

### **Rotary Valves**

**Yes/No** Are they clacking? – indicates loose spindle bearings and end play problems

**Yes/No** Are the rotors sticking/jamming when the instrument is in playing position?

**Yes/No** Does tightening the valve cap seize the rotor?

**Yes/No** Loose bearing plates?

**Yes/No** Bent lever/linkage arms?

**Yes/No** Bent paddles/spatulas/touch pieces?

**Yes/No** Do lever arms need swedging at the lever arm bridge?

**Yes/No** Burred string holes in the lever arms?

**Yes/No** Burred string screw heads?

**Yes/No** Loose stop arms?

**Yes/No** Bent rotor spindles?

**Yes/No** Improperly strung?

**Yes/No** Loose bearing plates?

**Yes/No** Improper valve porting

### **Case**

➤ Inspect and repair anything that will potentially harm the instrument:

➤ Condition of hinges

➤ Condition of latches/striker/hasps

➤ Separated corners and edges (finger joints)

➤ Loose or inadequate case blocking (nest)

**Yes/No** Inadequate mouthpiece storage – can the mouthpiece get loose?



# BAND INSTRUMENT REPAIR

Date 9 / 14 / 03  
 Mo. Day Year  
 Customer Name AARON BURR  
 Address 307 Pioneer Road  
 City, ST Zip Red Wing, MN 55066  
 Phone ( 651 ) 385 - 6350  
 School Coleville Elementary  
 Instrument Trumpet Make Conn  
 Model # 18B Serial # 981307A

**CASE ACCESSORIES**

Mpcce    Oil    Music  
 Mute    Brush    \_\_\_\_\_  
 Lyre    Swab    \_\_\_\_\_  
 Reeds    Strap    \_\_\_\_\_

Received By: Randy Jones

Completion Date: 10 / 14 / 03  
Mo. Day Year

Estimated Charge: \$ 78.00 - 98.00

**BIR** (612) 385-6350

Received By: Randy Jones

Completion Date: 10 / 14 / 03  
Mo. Day Year

Estimated Charge: \$ 78.00 - 98.00

Instr. Conn 18B trumpet

Ser.# 981307A

## Reverse Side of Repair Tag:

**WORK REQUESTED**

Chem flush  
Remove dents from: bell flange,  
bell throat, bell stem, bell bow,  
3rd valve slide crook, lower outer  
main t.s. tube, 2nd valve  
slide crook, lower 1st casing  
knuckle, mouthpipe.  
Straighten bell bow, stem & mouthpipe  
Align instrument body  
Supply & install casing to mouthpipe brace  
Soft solder 4 joints  
Repair #3 valve casing

# Band Instrument Repair Program

ATTN: Bookstore  
 MN State College-SE Technical  
 308 Pioneer Road  
 Red Wing, MN 55066

# Invoice

Number: **1002**  
 Date: **May 31, 2003**

**Bill To:**

Aaron Burr  
 307 Pioneer Road  
 Red Wing, MN 55066

**Ship To:**

Same

Customer Phone	Instrument	Make & Model	Serial Number	Repair Technician	Log-In Date
651-385-6350	Trumpet	Conn 18B	981307A	Randy Jones	9/14/03

Description	Tax	Amount
Chemical Flushed Instrument	✓	35.00
Removed Dents From: bell flare, bell throat, bell stem, bell bow, 3rd valve slide crook, lower outer main tuning slide tube, 2nd valve slide crook, lower 1st casing knuckle, mouthpipe	✓	20.00
Straightened bell bow, bell stem, and mouthpipe	✓	5.00
Aligned instrument body	✓	0.00
Supplied and installed casing to mouthpipe brace (parts plus labor)	✓	28.00
Soft Soldered 4 joints	✓	40.00
Repaired 3rd Valve Casing	✓	15.00
Cleaned Case	✓	0.00
Polished Mouthpiece	✓	0.00
Final Inspection and Play-Test	✓	0.00
Less BIR Discount	✓	(46.00)
<b>Sub-Total</b>		<b>\$97.00</b>
State Tax 6.50% on 97.00		6.31
<b>Total</b>		<b>\$103.31</b>

Thank you for assisting in the education of our students. If you have any questions or regarding your repair, please contact the Band Instrument Repair Program at Minnesota State College-Southeast Technical.  
 Phone: (800) 657-4849 or (651) 385-6370

0 - 30 days	31 - 60 days	61 - 90 days	> 90 days	Total
\$103.31	\$0.00	\$0.00	\$0.00	\$103.31



# BAND INSTRUMENT REPAIR

Date 9 / 14 / 03  
 Mo. Day Year  
 Customer Name Raymond Burr  
 Address 306 Pioneer Road  
 City, ST Zip Red Wing, MN 55066  
 Phone (651) 385-6350  
 School Twix Bluff Middle School  
 Instrument Trombone Make Yamaha  
 Model # YSL-354 Serial # 984302A

**CASE ACCESSORIES**

Mpcce    Oil    Music  
 Mute    Brush    Slide Cream  
 Lyre    Swab    Spray Bottle  
 Reeds    Strap    \_\_\_\_\_

Received By: James Jones  
 Completion Date: 10 / 14 / 03  
 Mo. Day Year  
 Estimated Charge: \$ 84.00 - 104.00



**BIR** (612) 385-6350

Received By: James Jones  
 Completion Date: 10 / 14 / 03  
 Mo. Day Year  
 Estimated Charge: \$ 84.00 - 104.00  
 Instr. Yamaha Trombone YSL-354  
 Ser.# 981307A

## Reverse Side of Repair Tag:

**WORK REQUESTED**

- Chem Flush
- Straighten and Align Outer and Inner Handslide Tubes.
- Un-solder, repair, & re-install handslide crook
- Remove main tuning slide crook dents
- Remove bell flare, throat & stem dents
- Straighten and align bell & gooseneck
- Remove inner and outer handslide tube dents.

# Band Instrument Repair Program

ATTN: Bookstore  
 MN State College-SE Technical  
 308 Pioneer Road  
 Red Wing, MN 55066

**Bill To:**

Raymond Burr  
 306 Pioneer Road  
 Red Wing, MN 55066

# Invoice

Number: **1004**  
 Date: **June 01, 2003**

**Ship To:**

Same

Customer Phone	Instrument	Make & Model	Serial Number	Repair Technician	Log-In Date
651-385-6350	Trombone	Yamaha YSL-354	984302A	James Jones	9/14/03

Description	Tax	Amount
Chemical Flushed Instrument	✓	40.00
Straightened and Aligned Outer and Inner Handslide Tubes	✓	15.00
Un-soldered, repaired, and re-installed handslide crook	✓	30.00
Removed Main Tuning Slide Crook Dents	✓	15.00
Removed Bell Flare, Throat, and Stem Dents	✓	20.00
Straightened and Aligned Bell and Gooseneck	✓	5.00
Removed Inner and Outer Handslide Tube Dents	✓	20.00
Cleaned Case	✓	0.00
Polished Mouthpiece	✓	
Less BIR Discount	✓	(45.00)
<b>Sub-Total</b>		<b>\$100.00</b>
State Tax 6.50% on 100.00		6.50
<b>Total</b>		<b>\$106.50</b>

Thank you for assisting in the education of our students. If you have any questions or regarding your repair, please contact the Band Instrument Repair Program at Minnesota State College-Southeast Technical.  
 Phone: (800) 657-4849 or (651) 385-6370

0 - 30 days	31 - 60 days	61 - 90 days	> 90 days	Total
\$106.50	\$0.00	\$0.00	\$0.00	\$106.50





# BAND INSTRUMENT REPAIR

Date 9 / 14 / 03  
 Mo. Day Year  
 Customer Name Billy Burr  
 Address 305 Pioneer Road  
 City, ST Zip Red Wing, MN 55066  
 Phone ( 651 ) 385 - 6350  
 School Red Wing Central High School  
 Instrument F Horn (double) Make Jupiter  
 Model # 608M Serial # 778901

**CASE ACCESSORIES**

Mpcce  Oil  Music  
 Mute  Brush  Rotor Spindle Oil  
 Lyre  Swab  Handkerchief  
 Reeds  Strap  \_\_\_\_\_

Received By: Fred Jones  
 Completion Date: 10 / 14 / 03  
 Mo. Day Year  
 Estimated Charge: \$ 104.<sup>00</sup> - 124.<sup>00</sup>



**BIR** (612) 385-6350

Received By: Fred Jones  
 Completion Date: 10 / 14 / 03  
 Mo. Day Year  
 Estimated Charge: \$ 104.<sup>00</sup> - 124.<sup>00</sup>  
 Instr. Jupiter Double Horn  
 Ser.# 778901

## Reverse Side of Repair Tag:

**WORK REQUESTED**

Chem Flush  
Remove dents from: bell plate,  
throat, stem, finger hook dents  
Remove dents from #1 branch  
Supply and install new mouthpiece  
Remove end play & side play from rotor  
bearings  
Tighten removable rotor plate  
Soft solder four joints  
Repair case hinges  
Supply and install two case latches

# Band Instrument Repair Program

ATTN: Bookstore  
 MN State College-SE Technical  
 308 Pioneer Road  
 Red Wing, MN 55066

# Invoice

Number: 1005  
 Date: June 01, 2003

**Bill To:**

Billy Burr  
 305 Pioneer Road  
 Red Wing, MN 55066

**Ship To:**

Same

Customer Phone	Instrument	Make & Model	Serial Number	Repair Technician	Log-In Date
651-385-6350	Double Horn	Jupiter 608M	778901	Fred Jones	9/14/03

Description	Tax	Amount
Chemical Flushed Instrument	✓	45.00
Removed Dents From: bell flare, bell throat, bell stem, finger hook area, and #1 branch.	✓	45.00
Supplied and installed new mouthpipe assembly (parts and labor)	✓	70.00
Removed end play and side play from rotor bearings	✓	45.00
Tightened loose removeable back bearing plates	✓	15.00
Soft Soldered 4 contact solder joints at valve casing	✓	40.00
Repaired case hinges		0.00
Supplied and installed two case latches (parts and labor)	✓	20.00
Less BIR Discount	✓	(150.00)
<b>Sub-Total</b>		<b>\$130.00</b>
State Tax 6.50% on 130.00		8.45
<b>Total</b>		<b>\$138.45</b>

Thank you for assisting in the education of our students. If you have any questions or regarding your repair, please contact the Band Instrument Repair Program at Minnesota State College-Southeast Technical.  
 Phone: (800) 657-4849 or (651) 385-6370

0 - 30 days	31 - 60 days	61 - 90 days	> 90 days	Total
\$138.45	\$0.00	\$0.00	\$0.00	\$138.45