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Wheel Inspection Guide Updated 7/28/15

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#### **Overview**



When inspecting wheels, we need to keep in mind, no wheel is going to be 100% cosmetically perfect. Wheels are a functional part of the vehicle and as such, they will be used outdoors and exposed to the elements. In short, they are auto parts, not fine jewelry. Most customers are not going to be looking as closely at their new wheels as our team members who will handle them during the mounting, packing, and shipping process. Wheel inspection involves common sense and it's also very subjective.

When it comes to cosmetic defects, if they are not visible from 3' (one meter) they are acceptable. This is as the wheel will be seen mounted on a vehicle. That's the industry standard.

Even so, the price of the wheel also needs to be considered. The more expensive the wheel, the more picky we can be about what is acceptable or not. A customer purchasing a \$1000 wheel is going to be a lot more critical than someone purchasing a steel wheel or an entry level alloy wheel.

#### 3' Visual Inspection Rule

The standard for visual inspection is from a distance of 3'. This is with the wheel sitting upright as it will be seen on the vehicle. This is for surfaces visible when the wheel as mounted on a vehicle.



### General Inspection Guidelines

- 'A' Surface = outer face of the wheel, from rim edge to center
  - No pits, or porosity allowable.
  - The 3' visual standard applies to all cosmetic flaws on the face.
  - Price point of wheel will also be a determining factor. Wheels that are \$300+ each should be held to a more strict standard than \$100 winter package wheels.
- The majority of all of the porosity rejections were from porosity found on the back of the spokes. This area is not considered to be an 'A' cosmetic surface. It is considered to be a 'B' or 'C' surface.
- All other surfaces, non-cosmetic, 'B' and 'C' surfaces (exterior barrel/back lip)
  - Minor pitting and porosity is allowed.
  - Pits larger than 6mm (1/4") across and / or deeper than 3mm (1/8") are not allowable. Reject if larger. If they are sealed with epoxy filler they are acceptable.
  - Many of the wheels have 'as cast' surface in the spoke recesses. These are allowed.
  - Cosmetic cover-up (paint touch up, filler, etc) are allowed. Paint smudges under the clear coat are acceptable. If the area 'bleeds' or shows a discoloration from the surrounding color, the wheel is to be rejected.

# Polished Wheels

 Polished wheels like the American Racing Ansen Sprint, T70R, T71R, Torq-Thrust 2.1, the Ultra Badlands, Baja Champ,

Drifter, Type 164, and Type 2 Dually will all have some surface imperfections right out of the box. Minor scratches are normal and are not a warranty issue on these wheels. Most will have a foggy, streaky, or oxidized finish on them. That's normal and not a defect in the finish. This is a raw finish that will be buffed out by the end user.















#### Paint Issues

- Color/finish match issues on the face visible from 3' are not acceptable
- If the finish does not match, please scan the wheels and send hardware support the color numbers for each wheel
- Please take photos of the wheels side by side and send to hardware support
- Always compare wheels to the sample on our website to determine which finish is correct
- Wheels and painted cover plates should match
- Circle the defects on the wheel with a wet erase marker and note the location in the Ao<sub>9</sub> notes

#### MISMATCHED CLEAR COAT



#### MISMATCHED CLEAR COAT





#### **MISMATCHED COLORS**



#### COVER PLATE COLOR DOES NOT MATCH THE WHEEL COLOR



#### Damage to bead area/ used wheels

- Any damage to the bead area of the wheel that would impair the mounting or proper seating of the tire is not acceptable
- Visible pits, gouges, or tool marks larger than 1-2mm on the lip are not acceptable.
- New wheels that look used or appear to have had a tire mounted on them are not acceptable if there are visible signs of use a customer would see
- Mark the damaged areas with a wet erase marker and note the location of the damage in the Ao9 notes

#### Damaged bead area: Rejects

GOUGED PAINT THAT COULD AFFECT TIRE BEAD

MORE BEAD AREA DAMAGE/GOUGED PAINT





# Pits on lip: Rejects

PIT ON LIP/EXPOSED ALLOY ON THE FLANGE

PITS LARGER THAN 3MM ON LIP FLANGE





# Machined/Polished Face and Lip Wheels

- Almost all machined face/lip wheels will have some small (2mm or less) bubbles or particles in the clear coat. That's normal due to the way the wheels are finished. We can allow two or three small bubbles on the wheel. Large bubbles visible from 3' away are not acceptable.
- The machined surfaces should be even and uniform in texture/appearance
- There should not be any paint on the machined surfaces
- Machine marks or scratches not following the machine patterns are grounds for rejecting the wheel. If there are more distinct machine markings following the machine pattern on the wheel, those are fine.
- Pitting or scratches on the machined surfaces visible from 3' away when looking at the wheel
  as it sits upright (as it will be seen on the vehicle) are not acceptable
- Cardboard burns/scratches are not acceptable
- Circle any warranty defects on the wheel with a wet erase marker and note it in the Aog notes

# Full Surface, Machined Face, Entry Level Black Painted Wheels from American Racing and Ultra

American Racing AR23, Outlaw, Baja Outlaw II, and Ultra Type 61, Type 62, and Type 5051 wheel models with full surface machining on the face and their black painted versions are going to have more minor imperfections than other machined wheels. These are generally lower priced, commodity wheels and we can be more lenient with inspection on these. The wheel description on the AS400 will have a ~ added to distinguish these wheels and the more lenient inspection standards that apply to them.



#### Full Face Machined Wheel acceptable flaws

The following are acceptable on these wheel models:

- •Tiny nicks or scratches on the lip edges from handling
- Small pits 4mm or less
- •Heavier machine marks that follow the cutting pattern on the rest of the wheel
- •Small pieces of debris in clear coat



#### Full Face Machining Flaws Not Acceptable

The following are **not** acceptable flaws on these models;

- Cardboard or packing material burns on the clear coat
- Waves in the finish
- •Scratches that do not follow the machine markings
- •Scratches or gouges visible from 3' away



#### Machined lip with missed paint:

#### Rejects

#### MISSED PAINT ON THE MACHINED LIP



#### MISSED PAINT ON THE MACHINED LIP



#### Clear coat issues: Rejects

#### **SCRATCHED CLEAR COAT**



#### CARDBOARD RASH ON MACHINED LIP



# Machine Marks Under Clear Coat: Reject



#### Paint defects

- Painted/clear coated surfaces should be smooth with no runs, bubbles, or debris larger than 1mm.
- Any paint defects on the A and B surfaces visible from 3' are not acceptable
- Visible paint touch-ups on A and B surfaces with mismatched paint are not acceptable
- Circle any warranty paint defects with a wet erase marker and note the location in the Ao<sub>9</sub> notes

**UNEVEN PAINT/RUNS** 

MISSING/THIN PAINT, SCRAPED PAINT WITH EXPOSED ALLOY



MISMATCHED PAINT COLOR TOUCH-UP



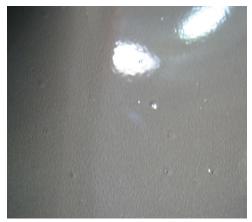
**RUNS IN PAINT** 



#### **RUNS IN CLEAR COAT**



#### 2 OR MORE PIECES OF DEBRIS IN CLEAR COAT/PAINT LARGER THAN 1MM IN DIAMETER



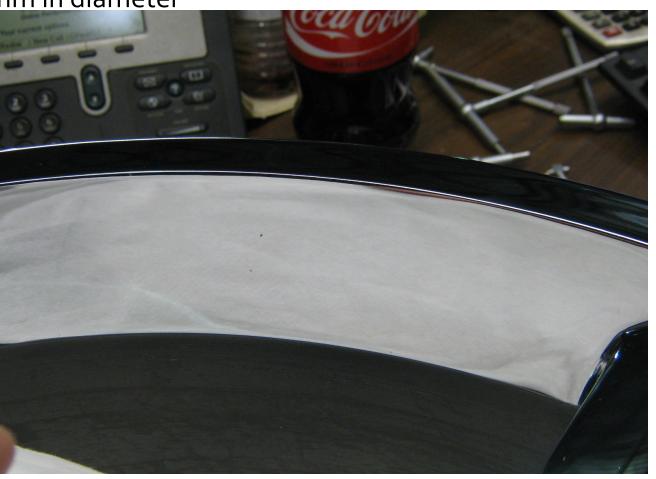


#### Pits or Porosity/Front Face

- 'A' surfaces such as the face and spoke surfaces cannot have pits or other porosity on the surface larger than 1mm in diameter or visible from 3'
- Circle any warranty defects with a wet erase marker and note the location in the Ao9 notes

#### Pits or Machine Marks: Reject

 Pits in polished lip larger than 1mm in diameter



#### Pits or Machine Marks: Rejects

PITS ON LIP SURFACE LARGER THAN 1MM



#### RIPPLES ON LIP SURFACE



#### Clear Coat Issues

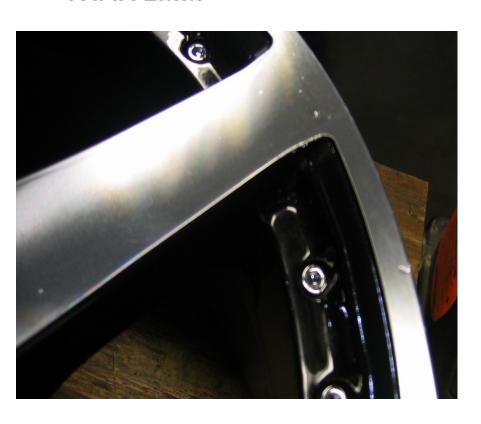
- Debris in the clear coat larger than 1mm or anything visible from 3'
- Checking (small cracks), clouding, or scuffing of the clear coat

 Bubbles in the clear coat larger than 1mm or visible from 3'

#### Clear Coat Defect: Rejects

DEBRIS IN CLEAR COAT LARGER THAN 1MM

**CHECKING IN CLEAR COAT** 





#### Non Warrantable Paint Issues

- Some thin spots on the back side of a wheel are acceptable if they are part of the painting process.
- Thin spots or "ghosts" showing where the wheels were clamped to painting stands from behind are acceptable
- Mounting machine clamp marks that indent the surface are not acceptable

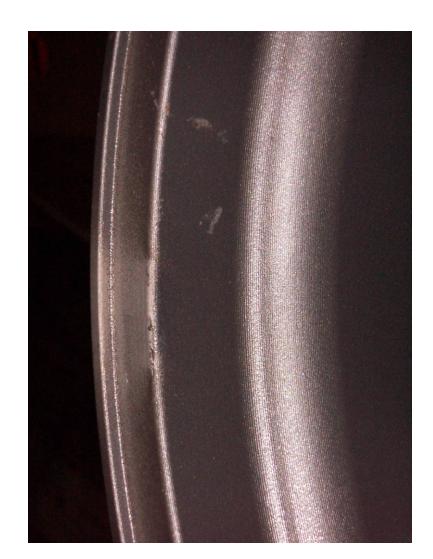
#### Non-Warrantable Paint Issues





#### Non-Warrantable Paint Issues





#### Small pits on the back surfaces

- All other surfaces, non cosmetic, 'B' and 'C' surfaces
  - Minor pitting and porosity smaller than 6mm is allowed
  - Epoxy filler on the back of the spokes is allowed as long as the wheel surface is sealed.
  - If the area 'weeps' out of open pores or shows a discoloration from the surrounding color that's not epoxy filler, the wheel is to be rejected
  - Many of the wheels have 'as cast' surface in the spoke recesses. These uneven surfaces are allowed
  - When in doubt, contact hardware support with photos
  - Circle any rejects with a wet erase marker and note the location in the Ao9 notes

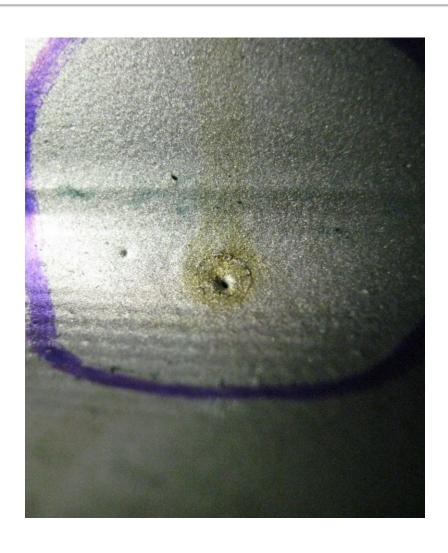
#### Pitting larger than 6mm: Rejects



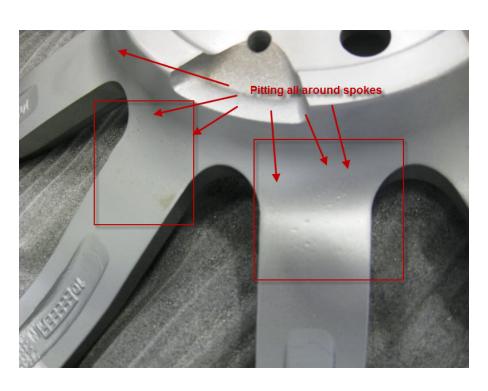


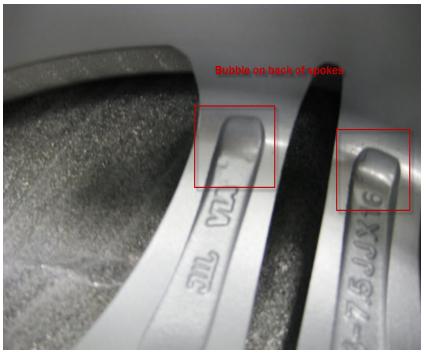
### Discolored paint/weeping: Rejects



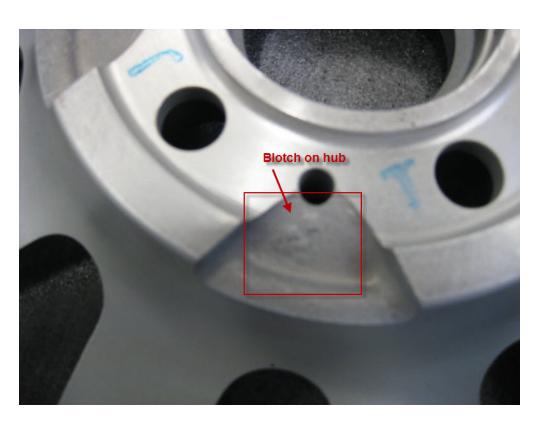


#### Acceptable as-cast surfaces





#### Acceptable as-cast surfaces





# Acceptable as-cast surfaces





## Pits and Porosity

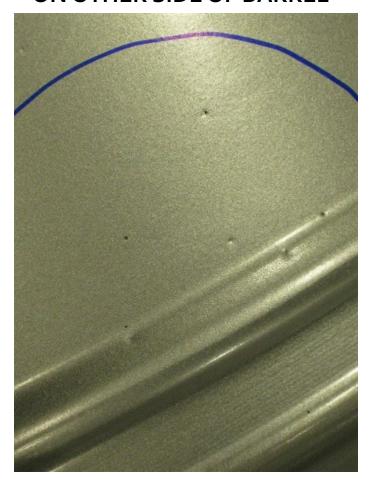
- Pits and porosity in the barrel section are not acceptable if they are visible on both the inner and outer surfaces.
- Pitting on only one surface is typically not a problem if it's only one or two small (less than 6mm) spots. Reject multiple spots (more than 2 large pits in one square inch area) or anything larger than 6mm.
- Welded repairs on the wheel surfaces are not acceptable.
- Pits or porosity near the lug seats is not acceptable.
- Pits accompanied by a discolored paint surface are not acceptable on any wheel surface. Epoxy filler is allowed.
- Circle any reject defects with a wet erase marker and note in the Aog notes

# Barrel porosity: Rejects

MULTIPLE HOLES, MATCHING HOLES ON OTHER SIDE OF BARREL



MULTIPLE HOLES, MATCHING HOLES ON OTHER SIDE OF BARREL



# Porosity: Rejects

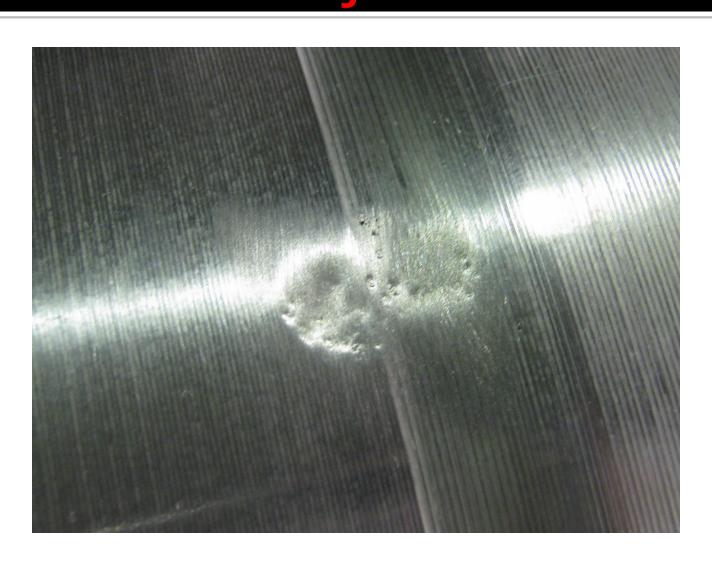
#### PITS NEAR LUG SEATS



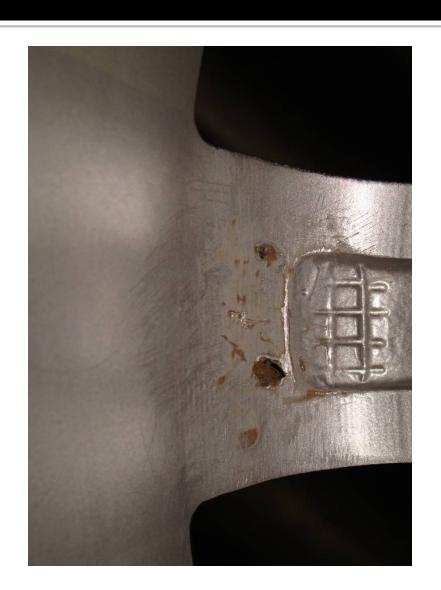
## PIT IN BARREL LARGER THAN 6MM



# Welded repairs are not acceptable: Reject



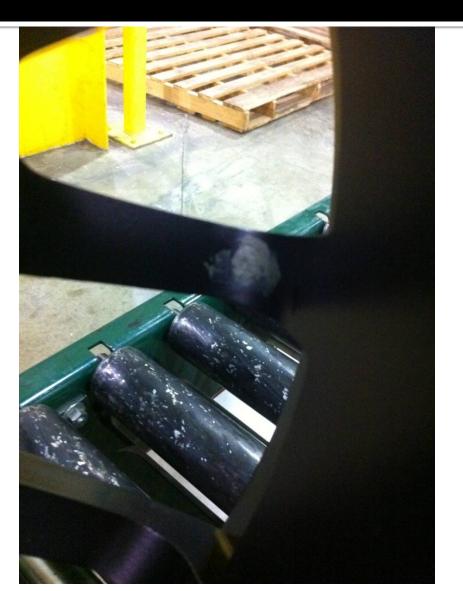
# Discolored Areas/Pits: Rejects





# Acceptable filled voids





# Casting /Machining Flaw Rejects

- Wheels with visible casting flaws should be rejected. When in doubt, send photos to HS for evaluation.
- Mark any casting or machining defects with a wet erase marker and note the location on the Aog notes



#### **Chrome Wheel Issues**

#### The Plating Process

- Polish. Quality begins as each wheel is hand ground and polished by highly experienced craftsmen.
- 2. Copper. Our proprietary chemistry plates each wheel with an initial thick coating of copper to provide corrosion resistance.
- Copper Buff. Recessed areas and imperfections are filled and brightened assuring a brilliant finish
- Nickel. Nickel is applied to maximize surface leveling, brightness and corrosion resistance.



Chrome. Decorative chrome provides a wheel with a deep blue/white finish and further promotes corrosion resistance.

### Chrome issues

- Flaking/peeling finish is grounds for rejecting the wheel
- Flash/burrs on visible machined surfaces are not acceptable
- Missing or visibly thin plating is not acceptable on the face of the wheel
- Thin layers under the cover plate or behind the spokes are okay
- Excessive grinding or buffing marks are not acceptable
- Pits accompanied by discolored areas on any wheel surface are not acceptable
- Circle any defects with a wet erase marker and note the location on the Ao<sub>9</sub> notes

# Flaking Finish Layers: Rejects





# Peeling Plating Layers: Rejects



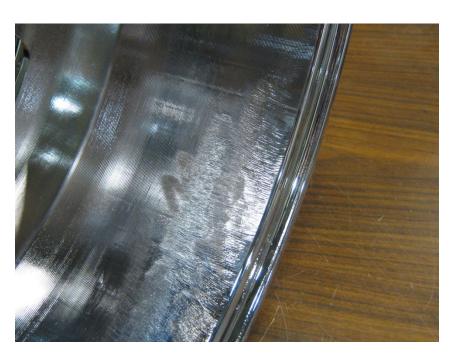


# Peeling Plating Layers: Rejects





# **Buffing/Grinding Marks: Rejects**





# Discolored Areas/Pits: Rejects





# Acceptable Chrome Issues

## THIN UN-POLISHED FINISH UNDER COVER PLATE

MARKS ON THE BACK OF THE WHEEL FROM CHROME PLATING RACKS ARE ACCEPTABLE





## **Acceptable Chrome Issues**



 Mild flash around lug openings that can be knocked off easily is acceptable. Carefully knock these off with a screw driver and proceed as normal

# OOR or Excessive Weight Wheels

- If a wheel takes excessive weight to balance, mark the amount of weight required to balance the bare wheel on the barrel with a wet erase marker and in the Aog notes so purchasing has a record of the amount when they warranty the wheel
- For 19" and smaller wheels 4oz or higher is excessive
- For 20" and larger wheels, 6oz or higher is excessive