

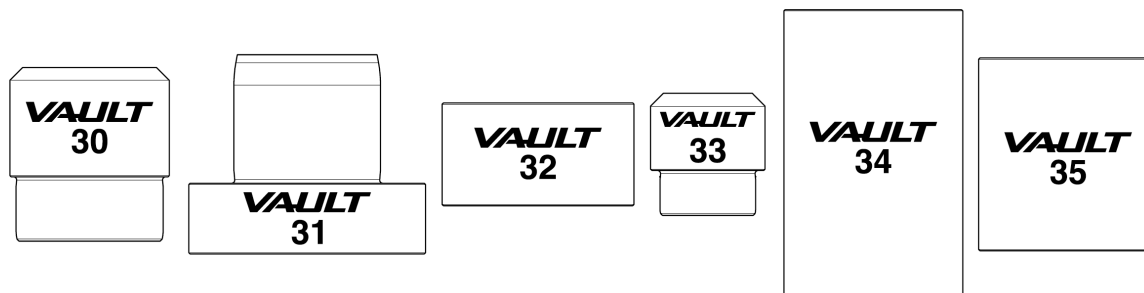
## ⚠ WARNING AND SAFETY INFORMATION

Race Face products should be installed by a professional bicycle service technician, in accordance with Race Face installation specifications. Improperly installed products can fail, causing the rider to lose control resulting in SEVERE INJURY OR DEATH. Modification or alteration of a Race Face product can cause product failure resulting in SEVERE INJURY OR DEATH.

Improper service, or use of non-Race Face replacement parts with Race Face products may cause the product to malfunction, resulting in SEVERE INJURY OR DEATH. Never use a power washer to clean your Race Face product.

### TRACE HUB SERVICE MANUAL

The instructions in this service manual can be used with the parts listed below. If you do not see your parts listed here, please contact your dealer for instructions and information.



#### VAULT KIT (F60185) CONTENTS:

PART	DESCRIPTION	QTY SUPPLIED IN KIT	TRACE HUB COMPATIBILITY
VAULT 30	Bearing removal tool, 6805	1	*N/A
VAULT 31	Bearing installation drift, 6805	2	*N/A
VAULT 32	Bearing installation drift, 18x30	2	J615
VAULT 33	Bearing removal tool, 18x30	1	J615
VAULT 34	Bearing installation drift, 6902 drive side	1	J624/J622
VAULT 35	Bearing installation drift, 6902 non-drive side	1	J624/J622

\*For use in VAULT hubs only  
Kit parts are laser etched to help you identify them easily. Visit [raceface.com](http://raceface.com) for more information on how to use this kit to service Trace hubs and VAULT hubs.

#### PARTS LIST

	RACE FACE TRACE FRONT HUBS	RACE FACE TRACE REAR HUBS
<b>HUB MODEL</b>	FRONT HUBS: J615 Aeffect R Front wheels, Aftermarket Hub F60199	REAR HUBS: J624/J622 Aeffect R and Aeffect R eMTB Rear wheels, Aftermarket Hubs F60190, F60191, F60192, F60193, F60194, F60195
<b>BEARINGS (REQUIRED)</b>	* 2x - F60123, BEARING, 18X30, CN, AM	* 2x - F60078, BEARING, 6902 CM
<b>AXLE (OPTIONAL)</b>	F60202, AXLE, TRACE, J-BEND, FRONT, 15x110 (J615)	F60200, AXLE, TRACE, J-BEND, REAR, 12x148 (J624) F60201, AXLE, TRACE, J-BEND, REAR, 12x157 (J622)
<b>OTHER PARTS TO REVIEW FOR REPLACING (OPTIONAL)</b>	F60199, ENDCAP, SET, TRACE, J-BEND, FRONT, 15X110	F60196, ENDCAP, SET, TRACE, J-BEND, REAR, 12X148/157 F60203, SPACER, TRACE, J-BEND, CASSETTE BODY F60204, SEAL, TRACE, J-BEND, CASSETTE BODY, NDS

\*Bearings are sold in single (1) qty. Purchase 2 to replace both bearings.

NOTE: Some Race Face and Easton spare parts can be interchanged as necessary, see Parts List Appendix A

#### TOOL AND SUPPLIES LIST FOR ALL SERVICE STEPS

Small flat head screwdriver or pick  
Small plastic mallet  
Bearing press  
VAULT 34 (or Park Tool Drift 2262-2 / 2272-2)  
VAULT 35 (or Park Tool Drift 2262-2 / 2272-2)  
VAULT 33  
VAULT 32 (x2)  
Rubber gloves  
Clean, lint-free rags  
15 mm or 12 mm blind bearing puller or vise with soft jaws (optional)

#### APPROVED GREASES AND OIL FOR ALL SERVICE STEPS

Easton Cassette Body Grease  
Buzzy's Slick Honey Grease  
Slickoleum Light Grease  
Dumonde Tech Classic Freehub Grease  
Dumonde Tech Advanced Freehub Grease  
Superlube Silicone Lubricating Grease  
Triflow Clear Synthetic Grease

#### WATERPROOF GREASE

Any thick waterproof, marine grease

#### OIL

Super Lube Multi Purpose Synthetic Oil With Syncolon (PTFE)  
Park Tool CL-1 Synthetic Blend Lube With PTFE  
Similar light PTFE oil

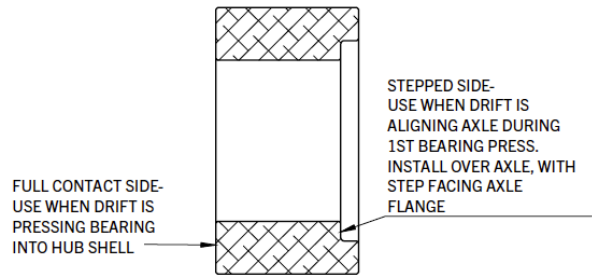
## TRACE FRONT HUB BEARING REPLACEMENT (J615)

### PART LIST

F60123, BEARING, 18X30, CN, AM (1 PC) - **2 REQUIRED FOR SERVICE**  
F60202, AXLE, TRACE, J-BEND, FRONT, 15x110 (J615)

### TOOL LIST

Plastic mallet  
Pick or small flat head screwdriver  
Bearing press  
VAULT 33  
VAULT 32 (x2)  
15 mm blind bearing puller or vise with soft jaws (optional)  
Rubber gloves



### FRONT BEARING REMOVAL

1. Remove the end caps.  
**NOTICE:** All Race Face end caps are designed to be removed by hand. Clamping end caps with vise jaws or pliers can damage them. A rubber glove can help improve grip. A 15 mm blind bearing puller tool can be used for difficult to remove end caps.
2. Insert the VAULT 33 removal drift into the rotor side of the axle.
3. Use the mallet to tap the removal drift until the non-rotor side bearing is ejected. Remove the drift and discard the bearing.
4. Keep the axle inserted into the rotor-side bearing. Insert the VAULT 33 removal drift into the non-rotor side and use the mallet to tap the drift until the rotor-side bearing and seal are ejected. Remove all tools, set the seal aside, and discard the bearing.
5. Clean and inspect all parts for signs of damage and wear, including the hub shell, axle, end caps, and seals. Check the seal for tears or worn edges. Use a flathead screwdriver or pick to remove and replace the seal if it is damaged.

### FRONT BEARING INSTALLATION

**IMPORTANT:** Always fully install the rotor-side bearing first for front hubs.

1. Apply a light coat of **WATERPROOF GREASE** to the axle bearing surfaces.
2. Install the new 18x30 bearing onto the end of the axle, making sure the red seal is facing out. Insert the VAULT 32 onto the axle with the flat side contacting the bearing. Install the bearing/axle/drift assembly into the rotor-side bearing bore.  
**IMPORTANT:** Never press a bearing using the stepped side of a bearing drift. Only press bearings with the flat side of the drift contacting the bearings.  
**IMPORTANT:** Do not apply grease or Loctite to the bearing bores.
3. Insert the second VAULT 32 into the non-rotor side bearing bore. Make sure the counter-bore side is facing in toward the axle flange.
4. Insert the bearing press through the drifts and tighten until the rotor-side bearing is firmly seated.  
**IMPORTANT:** Use a moderate force on the handles of bearing press. Forces too low or too high can result in excessive drag and premature wear.
5. Remove the press from the non-rotor side and leave all other parts in place.
6. Position the bearing on the axle of the non-rotor side and make sure the red seal is facing out.
7. Install the VAULT 32 onto the axle against the non-rotor side bearings. Make sure the flat side of the VAULT 32 is facing inward. Both VAULT 32 tools must now be contacting the bearings on both the rotor and non-rotor side.  
**NOTE:** Original bearings have black bearing seals on both sides. Replacement bearings are VAULT bearings used in Trace hubs and the red seals should face out.
8. Insert the bearing press and tighten until low force bottom out.
9. Make sure the axle rotates smoothly. If the axle has resistance or roughness, review the bearing press alignment and determine if this force is too high or too low. Consult your dealer for any questions or assistance in troubleshooting.
10. Apply an even coat of **WATERPROOF GREASE** to the outsides of both bearings.
11. Reinstall the end caps by hand.  
**NOTE:** The front end caps are symmetrical.

## TRACE REAR HUB BEARING REPLACEMENT (J624/J622)

### PART LIST

2x F60078: BEARING, 6902 CM

F60201, AXLE, TRACE, J-BEND, REAR, 12x148 (J624) or F60200, AXLE, TRACE, J-BEND, REAR, 12x157 (J622)

F60204, SEAL, TRACE, J-BEND, CASSETTE BODY, NDS

### TOOL LIST

Plastic mallet

Small flat head screwdriver or pick

Bearing press

VAULT 34 (or Park Tool Drift 2262-2 / 2272-2)

VAULT 35 (or Park Tool Drift 2262-2 / 2272-2)

12 mm blind bearing puller or vise with soft jaws (optional)

Lint-free rag

Rubber gloves

### REAR BEARING REMOVAL

1. Remove the drive side end cap and cassette body by firmly gripping and pulling the cassette body

**NOTICE:** All Race Face end caps are designed to be removed by hand. Clamping end caps with vise jaws or pliers can damage them. A rubber glove can help improve grip. A 12 mm blind bearing puller tool can be used for difficult to remove end caps.

2. Remove the cassette body 12.55 mm spacer.  
**TIP:** This spacer can be located on the axle against the drive side hub shell bearing OR it can stick to the inner cassette body bearing inner race.
3. Use a mallet to tap the drive-side end of the axle to eject the bearing and axle from the non-drive side.
4. Remove the non-drive side end cap, if it is not already removed. Remove the non-drive side seal and bearing from the axle. Set the seal aside and discard the bearing.
5. Turn the axle around and insert the non-drive end of the axle into the drive side bearing. Use a mallet to tap the axle and eject the bearing from the drive side. Remove the axle and discard the bearing.
6. Clean and inspect all parts for signs of damage and wear, including the hub shell, axle, cassette body, and seals. Check the cassette body seal lip and non-drive side seal for tears or worn edges. Use a flathead screwdriver or pick to remove and replace the seals if they are damaged.

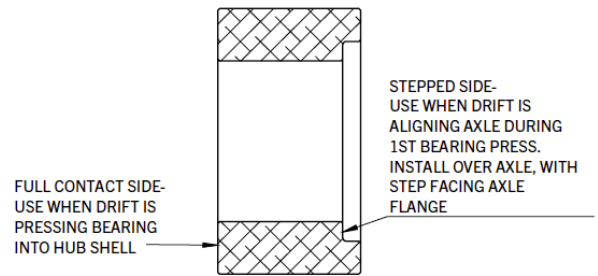
### REAR BEARING REPLACEMENT

**IMPORTANT:** Always fully install the rear drive-side bearing first for rear hubs.

1. Apply a light coat of **WATERPROOF GREASE** to the axle bearing surfaces.
2. Slide the bearing onto the drive side of the axle with the red seal facing out. Add the VAULT 34 onto the axle/bearing assembly. Insert the axle/bearing/drift assembly into the drive side bearing bore.  
**IMPORTANT:** Install/press only one bearing at a time.
3. Insert the VAULT 35 into the non-drive side bearing bore with the stepped side facing in.
4. Insert the bearing press through the hub, all drifts, axle, and bearing. Tighten the press until the bearing is fully installed.  
**IMPORTANT:** Use a moderate force on the handles of the bearing press. Forces too low or too high can result in excessive drag and premature wear.
5. Remove the press from the non-drive side.
6. Slide the non-drive side bearing onto the axle with the red seal facing out.
7. Place the flat side of the VAULT 35 against the bearing.
8. Assemble the press, ensure all drifts are aligned, and tighten with low force until the non-drive side bearing is fully installed.
9. Remove the press and drifts.
10. Make sure the axle rotates smoothly. If the axle has resistance or roughness, review the bearing press alignment and determine if this force is too high or too low. Consult your dealer for any questions or assistance in troubleshooting.

### REAR HUB FINAL ASSEMBLY

1. Apply a small and even coat of **LIGHT CASSETTE BODY GREASE** to the non-drive side bearing face.
2. Apply **LIGHT CASSETTE BODY GREASE** to the inner lip of the non-drive side end cap seal. Install the seal into the non-drive side hub shell bore with the sealing lip edge facing out. Use VAULT 34 or VAULT 35 to fully seat the non-drive side end cap seal.
3. Install the non-drive side end cap.
4. Install the cassette body 12.55 mm spacer onto the axle.
5. Grease the hub shell drive ring with a moderate layer of **LIGHT CASSETTE BODY GREASE**.
6. Apply **OIL** inside the cassette body seal lip.  
**For Shimano HG and XD cassette bodies only:** Apply a thin coat of **LIGHT CASSETTE BODY GREASE** to inside of seal lip at the outer cassette body bearing.
8. Slide the cassette body onto the axle. Make sure to rotate the cassette body counter-clockwise to disengage the pawls and allow the cassette body to fully seat.
9. **For Micro Spline cassette bodies only:** Apply a thin coat of **WATERPROOF GREASE** to the outer cassette body bearing, then install the thin steel washer.
10. Install the correct end cap onto the axle, according to your cassette body specification:  
**Shimano HG and XD:** Install the 17.5mm long end cap, which has no logo.  
**Micro Spline:** Install the 19.3mm long end cap, which has the Micro Spline logo.



## CASSETTE BODY REPLACEMENT (J624/J622)

This cassette body replacement procedure is only for the cassette bodies listed in the parts list below.

### PART LIST

F60190: CASSETTE BODY, TRACE. J-BEND, MTN-HG, ALLOY

F60191: CASSETTE BODY, TRACE. J-BEND, MTN-HG, STEEL

F60192: CASSETTE BODY, TRACE. J-BEND, XD, ALLOY

F60193: CASSETTE BODY, TRACE. J-BEND, XD, STEEL

F60194: CASSETTE BODY, TRACE. J-BEND, MS, ALLOY

F60195: CASSETTE BODY, TRACE. J-BEND, MS, STEEL

### TOOL LIST

Plastic mallet

12 mm blind bearing puller or vise with soft jaws (optional)

Rubber gloves

### REMOVAL

1. Firmly pull the end cap and cassette body by hand to remove them.

**NOTICE:** All Race Face end caps are designed to be removed by hand. Clamping end caps with vise jaws or pliers can damage them. A rubber glove can help improve grip. A 15 mm or 12 mm blind bearing puller tool can be used for difficult to remove end caps.

2. Remove the cassette body 12.55 mm spacer.

**TIP:** This spacer can be located on the axle against the drive side hub shell bearing OR it can stick to the inner cassette body bearing inner race.

### INSTALLATION

1. Apply **LIGHT OIL** to the cassette body seal inner lip.

2. Install the cassette body 12.55 mm spacer onto the axle.

3. Grease the hub shell drive ring with a moderate layer of **LIGHT CASSETTE BODY GREASE**.

**Shimano HG and XD cassette bodies only:** Apply a thin coat of **LIGHT CASSETTE BODY GREASE** to inside of seal lip at the outer cassette body bearing.

4. Slide the cassette body onto the axle. Make sure to rotate the cassette body counter-clockwise to disengage the pawls and allow the cassette body to fully seat.

5. **Micro Spline cassette bodies only:** Apply a thin coat of **WATERPROOF GREASE** to the outer cassette body bearing, then install the thin steel washer.

6. Install the correct end cap onto the axle, according to your cassette body specification:

**Shimano HG and XD:** Install the 17.5 mm long end cap, which has no logo.

**Micro Spline:** Install the 19.3 mm long end cap, which has the Micro Spline logo.

## REAR HUB CLEANING AND LUBRICATION

This procedure should be completed once per riding season or more frequently during severe wet conditions.

### TOOL LIST

Light degreaser or solvent such as Simple Green  
Small flat head screwdriver or pick  
Pawl and spring kit, hub seal, end cap seal kit (optional)  
12 mm blind bearing puller or vise with soft jaws (optional)  
Lint-free rag  
Rubber gloves

### HUB REMOVAL

1. Firmly pull the drive side end cap and cassette body by hand to remove them.  
**NOTICE:** All Race Face end caps are designed to be removed by hand. Clamping end caps with vise jaws or pliers can damage them. A rubber glove can help improve grip. A 12 mm blind bearing puller tool can be used for difficult to remove end caps.
2. Remove the cassette body 12.55 mm spacer.  
**TIP:** This spacer can be located on the axle against the drive side hub shell bearing OR it can stick to the inner cassette body bearing inner race.
3. Inspect the cassette body seal lip for tears or worn edge. Use a flathead screwdriver or pick to remove and replace the seal if it is damaged.
4. Remove the non-drive side end cap by hand.  
**NOTICE:** All Race Face end caps are designed to be removed by hand. Clamping end caps with vise jaws or pliers can damage them. A rubber glove can help improve grip. A 12 mm blind bearing puller tool can be used for difficult to remove end caps.
5. Use a small flat head screwdriver or pick to remove the non-drive side end cap seal.
6. Inspect the non-drive side end cap seal lip for tears or worn edge. Use a flathead screwdriver or pick to remove and replace the seal if it is damaged.

### CLEAN AND INSPECT

1. Thoroughly inspect all parts for damage and wear. Replace the cassette body if excessive wear or corrosion are present.
2. Thoroughly clean all parts. Clean the drive ring in the hub with degreaser and a lint-free rag. Clean the cassette body and pawls with degreaser. Be sure to use an evaporating degreaser and wait until areas are free from degreaser before applying fresh grease. When using degreaser be sure to keep it away from the bearings.  
**IMPORTANT:** Do **NOT** apply grease or Loctite to the bearing bores.
3. Use a dry, lint-free rag to clean the non-drive side outer bearing surface and cassette body outer bearing/seal.
4. Clean all the end caps and end cap seals using a light degreaser or solvent such as Simple Green. Do not use harsh cleaners, brake cleaner, or acetone.

### REAR HUB INSTALLATION

1. Apply a small and even coat of **LIGHT CASSETTE BODY GREASE** to the non-drive side bearing face.  
**IMPORTANT:** Do **NOT** apply grease or Loctite to the bearing bores.
2. Apply **LIGHT CASSETTE BODY GREASE** to the inner lip of the non-drive side end cap seal. Install the seal into the non-drive side hub shell bore. Make sure the sealing lip edge faces out. Push the seal in until it is fully seated against the bearing. Press the VAULT 34 or VAULT 35 by hand to fully seat the non-drive side end cap seal.
3. Install the cassette body 12.55 mm spacer onto the axle.
4. Grease the hub shell drive ring with a moderate layer of **LIGHT CASSETTE BODY GREASE**.
5. Apply **OIL** inside the cassette body seal lip.
6. **Shimano HG and XD cassette bodies only:** Apply a thin coat of **LIGHT CASSETTE BODY GREASE** to inside of seal lip at the outer cassette body bearing.
7. Slide the cassette body onto the axle. Make sure to rotate the cassette body counter-clockwise to disengage the pawls and allow the cassette body to fully seat.
8. **Micro Spline cassette bodies only:** Apply a thin coat of **WATERPROOF GREASE** to the outer cassette body bearing, then install the thin steel washer.
9. Install the correct end cap onto the axle, according to your cassette body specification:  
**NOTE:** The rear longer end cap installs on the non-drive side. The front end caps are symmetrical.  
**Shimano HG and XD:** Install the 17.5mm long end cap, which has no logo.  
**Micro Spline:** Install the 19.3mm long end cap, which has the Micro Spline logo.

## END CAP REPLACEMENT

### PART LIST

F60199, ENDCAP,SET,TRACE,J-BEND,FRONT,15x110 (J615)

F60196, ENDCAP,SET,TRACE,J-BEND,REAR,12x148/157 (J624/J622)

### TOOL LIST

15 mm or 12 mm blind bearing puller or vise with soft jaws (optional)

Lint-free rag

Rubber gloves

### REMOVAL

1. Remove the end caps by hand.

**NOTICE:** All Race Face end caps are designed to be removed by hand. Clamping end caps with vise jaws or pliers can damage them. A rubber glove can help improve grip. A 15 mm or 12 mm blind bearing puller tool can be used for difficult to remove end caps.

### INSTALLATION

If the wheel is NOT new, clean the bearings with a lint-free rag and apply new grease as recommended below:

**Front J615:** Apply **WATERPROOF GREASE** to cover the outer seals of the bearing.

**Rear J624/J622:** Apply thin cassette body grease on the insides of the end cap seals.

**For Shimano HG and XD cassette bodies only:** Apply a thin coat of **LIGHT CASSETTE BODY GREASE** to the inside of the seal lip at the outer cassette body bearing.

**For Micro Spline cassette bodies only:** Apply a thin coat of **WATERPROOF GREASE** to the outer cassette body bearing, then install the thin steel washer.

2. Install the correct end cap onto the axle, according to your cassette body specification:

**NOTE:** The rear longer end cap installs on the non-drive side. The front end caps are symmetrical.

**Shimano HG and XD:** Install the 17.5mm long end cap, which has no logo.

**Micro Spline:** Install the 19.3mm long end cap, which has the Micro Spline logo.

## APPENDIX A - TRACE SPARE PARTS LIST (J615/J624/J622)

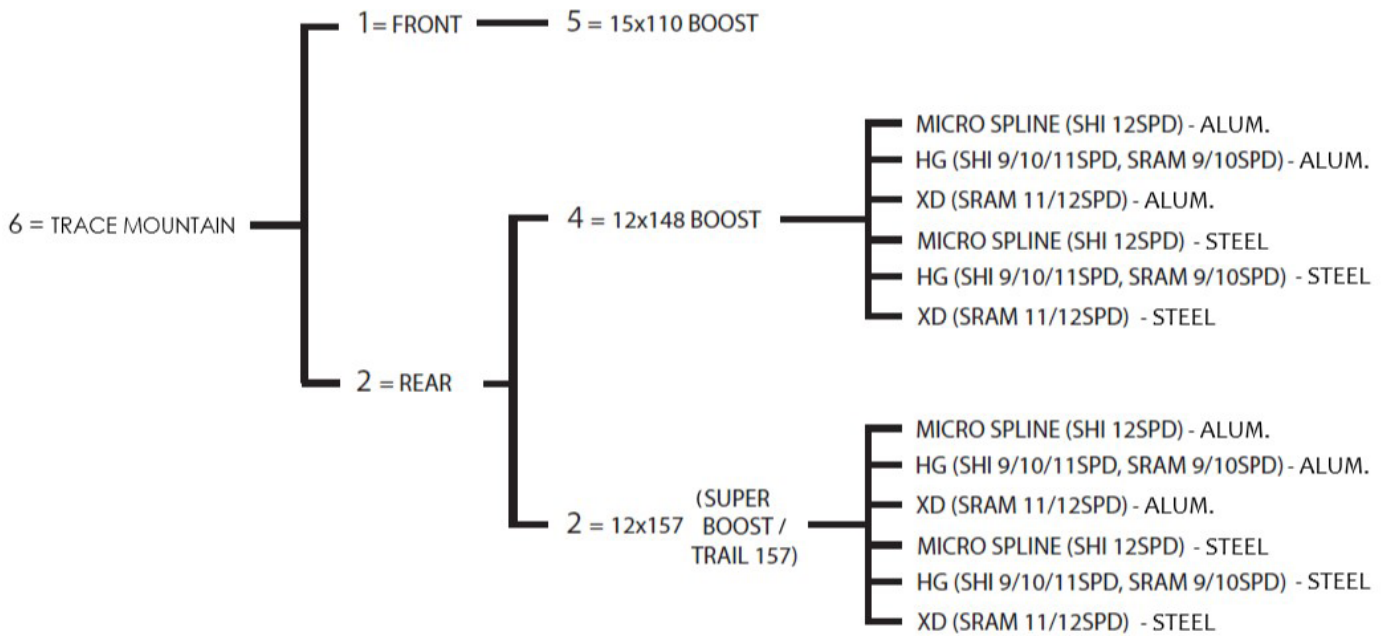
- Compatible part.
- o Alternate option. Avoid mixing different spoke types when possible.

PART NUMBER	DESCRIPTION	AEFFECT R FRONT	AEFFECT R REAR	AEFFECT R EMTB REAR
F60190	CASSETTE BODY,TRACE.J-BEND,MTN-HG,ALLOY		•	
F60191	CASSETTE BODY,TRACE.J-BEND,MTN-HG,STEEL		•	•
F60192	CASSETTE BODY,TRACE.J-BEND,XD,ALLOY		•	
F60193	CASSETTE BODY,TRACE.J-BEND,XD,STEEL		•	•
F60194	CASSETTE BODY,TRACE.J-BEND,MS,ALLOY		•	
F60195	CASSETTE BODY,TRACE.J-BEND,MS,STEEL		•	•
F60202	AXLE,TRACE,J-BEND,FRONT,15x110	•		
F60200	AXLE,TRACE,J-BEND,REAR,12x148		•	•
F60201	AXLE,TRACE,J-BEND,REAR,12x157		•	•
F60123	BEARING,18X30,CN,AM	•		
8022803	BEARING 18X30 CN AM	o		
F60078	BEARING,6902 CM		•	•
8022798	BEARING 6902 CM AM		o	o
F60079	BEARING,15267 CM		•	•
8022799	BEARING 15267 CM AM		o	o
F60146	BEARING,6802,2PCS		•	•
F60185	BEARING,DRIFT,KIT,VAULT,F+R, AM	•	•	•
F60199	ENDCAP,SET,TRACE,J-BEND,FRONT,15x110	•		
F60196	ENDCAP,SET,TRACE,J-BEND,REAR,12x148/157		•	•
F60204	SEAL,TRACE,J-BEND,CASSETTE BODY,NDS		•	•
F60203	SPACER,TRACE,J-BEND,CASSETTE BODY		•	•
F60021	MTN TUBELESS KIT,VALVE X2 /TAPE 10MX29MM	•	•	•
ORM20AER302928H	RIM,AEFFECT-R,30,29",28H,BLK	•	•	
ORM20AER3027.528H	RIM,AEFFECT-R,30,27.5",28H,BLK	•	•	
ORM20AEREMTB302932H	RIM,AEFFECT-R,EMTB,30,29",32H,BLK			•
ORM20AEREMTB3027.532H	RIM,AEFFECT-R,EMTB,30,27.5",32H,BLK			•
B60061	DECAL SHEET,MY21 AEFFECT R,29,GRY	•	•	
B60062	DECAL SHEET,MY21 AEFFECT R,27.5,GRY	•	•	
B60063	DECAL SHEET,MY21 AEFFECT R EMTB,29,GRY			•
B60064	DECAL SHEET,MY21 AEFFECT R EMTB,27.5,GRY			•
F60118LP185	DECAL KIT LARGE 185C RED	•	•	•
F60118LP389	DECAL KIT LARGE 389C NEON YELLOW	•	•	•
F60118LP802	DECAL KIT LARGE 802C NEON GREEN	•	•	•
F60118LP801	DECAL KIT LARGE 801C NEON BLUE	•	•	•
F60118LP021	DECAL KIT LARGE 021C ORANGE	•	•	•
F60118LPBLK	DECAL KIT LARGE BLACK	•	•	•
F60118LP2597	DECAL KIT LARGE 2597C PURPLE	•	•	•
F60118LP10392	DECAL KIT LARGE 10392 GREY	•	•	•
D60125	SPOKE,J-BEND 2.0/1.7 TCS,296MM,BLK	•	•	
D60124	SPOKE,J-BEND 2.0/1.7,TCS,278MM,BLK	•	•	
D60127	SPOKE,J-BEND 2.0/1.8 TCS,290MM,BLK			•
D60126	SPOKE,J-BEND 2.0/1.8 TCS,271MM,BLK			•
F60128	NIPPLE,BRASS,DOUBLE SQUARE,2.0x16,SL,BLK,32PAK	•	•	•
D60046	TUBELESS VALVE,W/R CORE 46MM	•	•	•
8022218	TUBELESS VALVE w/ removable core 46mm	o	o	o

APPENDIX B - TRACE HUB CODES

**TRACE** J624

J prefix denotes J-Bend Hub.



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**RACEFACE**

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