


Crack Treatments

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- 
- ❑ Review Crack Treatments
 - ❑ Review Best Practices
 - ❑ Discuss Mastics as a Pavement Preservation Tool

Pavement Preservation

- **Select the right preventative maintenance treatment at the right time for the right road.**
 - Jim Sorenson
- **Have the right people with the right training.**
 - Dale Decker

Pavement Preservation



Crack Sealing is Pothole Prevention

–Larry Galehouse



CRACK TREATMENT TYPES

- **Crack Sealing**
- **Crack Filling**
- **Wide Crack Sealing**

CRACK TREATMENT TYPES

- **Crack Sealing**
 - Placement of specialized treatment materials (sealant) above or into cracks using unique configurations to prevent the intrusion of water and incompressible materials into the crack
- **Crack Filling**
- **Wide Crack Sealing**

CRACK TREATMENT TYPES

- **Crack Sealing**
- **Crack Filling**
 - Placement of ordinary treatment materials into low-moving cracks to reduce infiltration of water and to reinforce the adjacent pavement
- **Wide Crack Sealing**

CRACK TREATMENT TYPES

- **Crack Sealing**
- **Crack Filling**
- **Wide Crack Sealing**
 - Use of a hot applied flowable, aggregate filled, flexible material applied as a void-less mass to fractures, voids or other discontinuities for preventive maintenance and repair to increase safety, slow continued deterioration and restore the pavement ride condition

NCHRP Project No. 20-07/Task 339

Best Practices for Crack Treatments for Asphalt Pavements

- **Definition of crack sealing and crack filling well established**
 - 62% of respondents indicated no distinction is made between the two

Respondents pay greater attention to climatic conditions for crack sealing than for crack filling

Crack Sealing Best Practices

Two Primary Applications:

- ✓ **Rout & Seal**
 - ✓ Transverse Cracks <3/4" wide.

- ✓ **Clean & Seal**
 - ✓ Longitudinal Cracks, High Crack Density or Cracks >3/4" and <1½"



Application Options



RESERVOIR



CAPPING

There are two basic options for crack sealing. Creating a reservoir in the pavement to accept the sealant or capping the crack; filling the existing crack opening and applying a cap of sealant on the pavement surface.

Creating a reservoir in the pavement to accept the sealant is how you assure that the movement that the sealant is subjected to is within the range that the sealant is designed to perform.

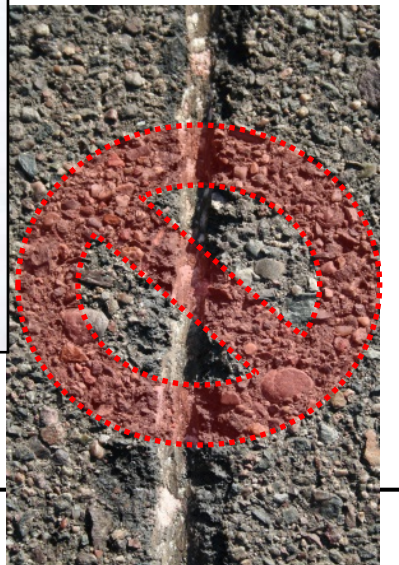
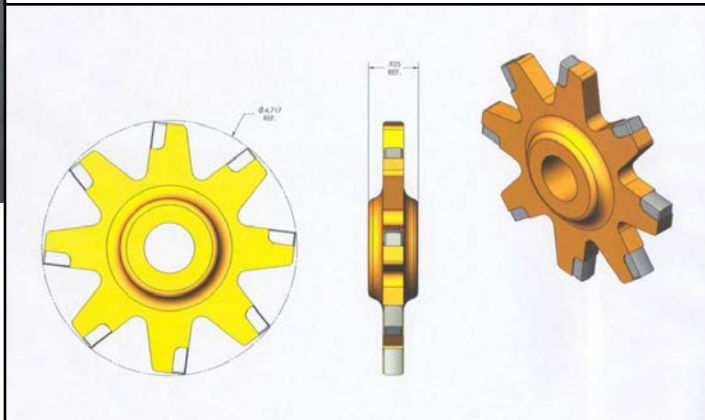
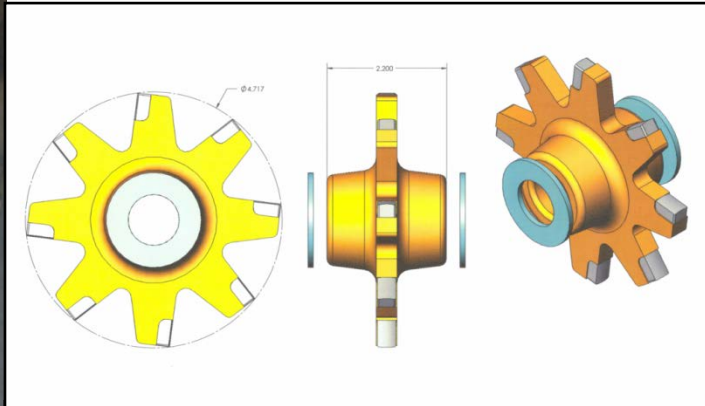
Both of these applications have their place and can provide a quality seal for the crack.

Keys to Success

- Good Pavement



Keys to Success



Key to success:

- Well Maintained Equipment

Keys to Success



Key to success:

- Centered over the crack

This rout was next to the crack placing all the stress on one side of the sealant.

Keys to Success

Recap Keys to Success when Routing:

- Centered over the crack
- Hit the crack
- Well maintained equipment
- Good quality pavement

- OTHERS
 - Router thru minor overlays into sound pavement
 - If you get extreme spalling when routing STOP



Cutting a reservoir is cleaner!



Sealant Application

Keys to Success

- Clean Pavement
- Dry Pavement
- Structurally Sound Pavement
- Correct Temperatures
 - Pavement
 - Ambient
 - Sealant
- Proper Application



Clean



Heat Lance



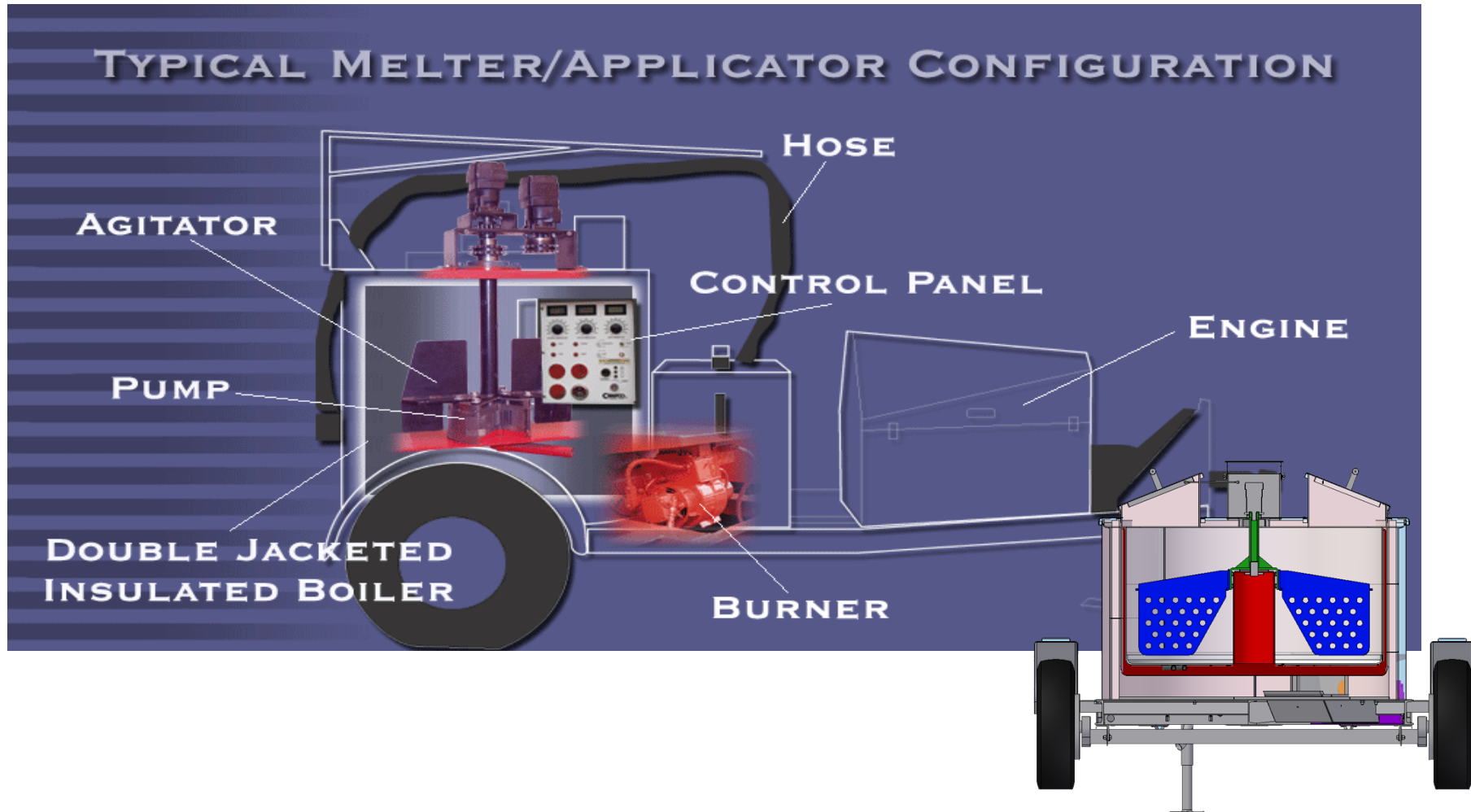
Don't Burn the Crack



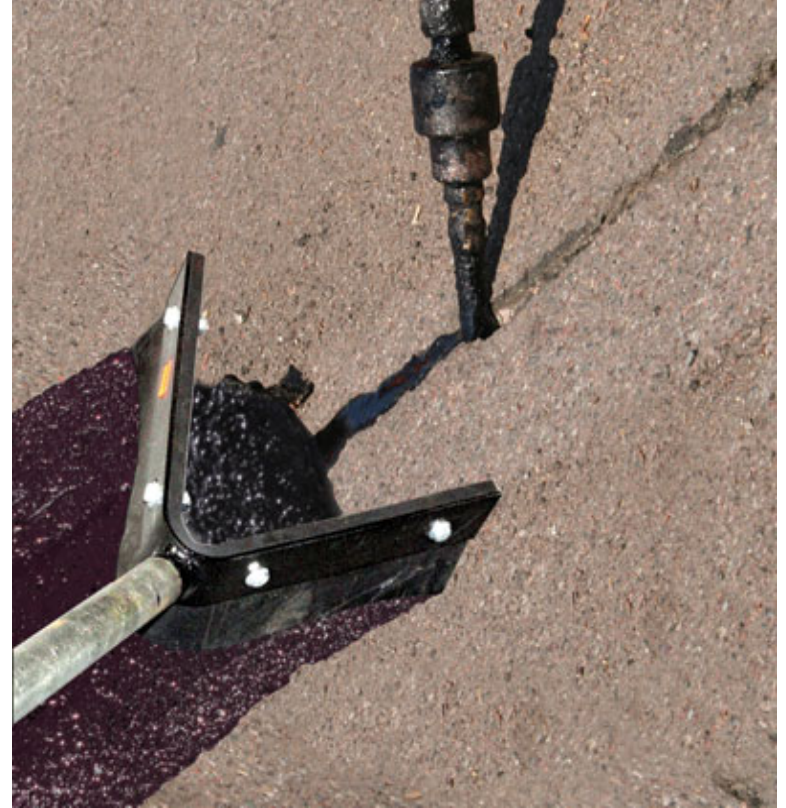
Weather



Sealant Temperature



Sealant Application



Detack



Crack Treatments

Wide Crack sealing

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS USE

- Longitudinal Joint Failures
- Wide Transverse Joints >1 ½”
- Wide Cracks
- Depressed Thermal Cracks
- Sunken Bridge Deck approaches
- Potholes
- Spall
- Leveling
 - Sunken bridge deck approaches
 - Sunken utility cuts
 - Shoulder pavement drop off

Crack Treatments

Wide Crack sealing

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS

A hot applied flowable, aggregate filled, flexible material applied as a void-less mass to fractures, voids or other discontinuities for preventive maintenance and repair to increase safety, slow continued deterioration and restore the pavement ride condition

Crack Treatments

Wide Crack sealing

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS

- Hot Applied
- Aggregate Filled
- Waterproof and Impermeable
- Voidless
- Flowable
- Highly Adhesive
- Flexible
- Stable
- Pre-packaged / extendable



Crack Treatments

Wide Crack sealing

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS

COMPOSITION

Binder- Asphalt modified with Polymers and oils to better resist shoving and cracking

Aggregate – designed to provide load bearing requirements and compression resistance with necessary stability while allowing material to flow

Crack Treatments

Wide Crack sealing

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS

- **CRAFCO MASTIC ONE**
- **CRAFCO POLYPATCH**
- **DEERY LEVEL AND GO**

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Center slab Crack Repair
Rt 20 - GA*

CRAFCO MASTIC ONE



HOT APPLIED AGGREGATE FILLED MASTICS



*Snowmobile Crossing
- NH -*

CRAFCO POLYPATCH

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Repair of Cupped Joints-
Minnesota*



CRAFCO MASTIC ONE



HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



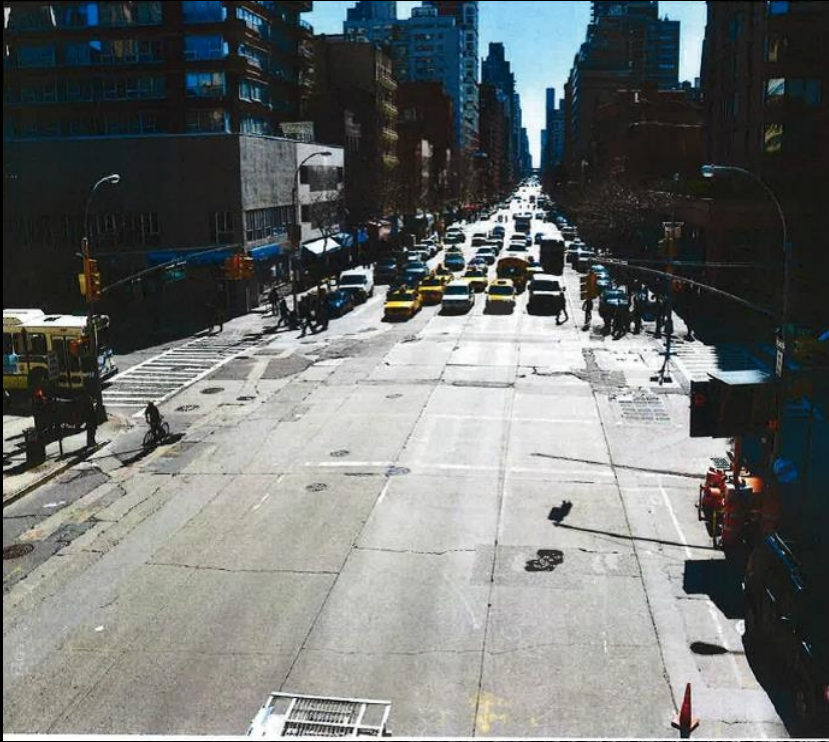
*Filling rumble Strips
- UTAH -*



CRAFCO MASTIC ONE



HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Crack Repair under overlay
- NYC -*



CRAFCO POLYPATCH

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Large Crack Repair
Phoenix, AZ*



HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Patching under Micro
- PA -*

CRAFCO POLYPATCH

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Large Crack Repair
-Barstow, CA-*



HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*Bridge Deck Approach Repair
- Dover, DE -*

CRAFCO MASTIC ONE

HOT APPLIED AGGREGATE FILLED PATCHING MASTICS



*GA Airport Transverse Crack Repair
– Lake Placid, NY –*



Crack Treatments

QUESTIONS

