Redeposition of soil

Facts About Redeposition

When insoluble soil particles are released from fabric's while being cleaned, the soil particles are suspended in the solvent and picked up on the filter. However, before passing through the filter, loose soil particles may be attracted to a fabric in the wheel which results in an overall gray or dull appearance. Sometimes the redeposition will be limited in area to a streak or blotch. Not every garment in a load may be affected. Often, only one garment is affected. Resin finishes, which give fabrics easy care features, attract loose soil particles. Polyesters, nylons, acrylics as well as soft woolens when rubbed during dry cleaning become electrically charged and attract loose soil particles. Once attracted to the resin finish or electrically charged fibers, these particles cannot be easily released.
Suggestions To Avoid Redeposition

The two basic objectives in dry cleaning are to remove the soil from the garment and then to remove the soil from the solvent as quickly as possible to avoid redeposition. Even where the solvent purity is properly maintained, redeposition may occur under certain predictable circumstances which can usually be avoided.
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Improve flow of solvent from the dry cleaning machine through the filter and back to the dry cleaning machine. The complete change of solvent in the machine should require no more than 1 minute. The possibility of redeposition increases as the flow of solvent is slowed down. The reason for a slow solvent flow may be:
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clogged filter tubes, disc filters or cartridges
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faulty filler pump,
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clogged button trap, inlet lines or outlet lines. High or low filter pressure is an indication of filter problems.
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Pure solvent. Distillation is required to remove solvent soluble impurities. The filter removes only the insolubles such as soot, carbon and dust. For each 100 pounds of garments it is desirable to distill at least 10 gallons of solvent. Some filters such as spin disks require more distillation to maintain the purity of the solvent (20 gallons for each 100 pounds of dry cleaning.
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Improper soap injection or detergent concentration charge. Most detergents (soaps) hold insoluble soil in suspension. Detergents are also helpful in minimizing the undesirable effect of moisture on many fabrics. The detergent manufacturer’s suggestion for concentration and additions should be maintained.
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Proper load classification. Dark color garments usually release more dye and can be assumed to carry more soil. When light and dark colored garments are drycleaned in the same load, redeposition is more likely.
- High moisture retentive fabric. Many fabrics such as cottons, wools and rayons can retain a high percentage of moisture and will attract more loose soil when wet or damp. If such garments are not allowed to dry after wetside spotting, they will attract soil when entered in the dry cleaning machine which remains as redeposition.
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Overloading the wheel prevents circulation of the solvent especially to the center of the load. The insoluble particles are trapped and more easily redeposited on the fabric instead of being pumped through the filter.
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Hot solvent. Solvent temperature should be between 75-80°F. Hot solvent releases moisture that can contribute to redeposition.
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Excessive dyes and impurities. The solvent color should be lighter than the color of a light beer. Increased distillation and carbon should be used.Determining Redeposition on Garment
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Apply oily type paint remover to area of garment
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Tamp vigorously.
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Apply ammonia and oily type paint remover.
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Tamp vigorously. If the area becomes lighter, the problem is redeposition.Correction Procedure

The procedure for the removal of redeposition is time consuming and frequently unsuccessful. Localized areas should be pre-spotted with oily type paint remover, tamped and rerun. Sometimes rust remover is effective on an affected area that attracted metallic impurities. For large areas use the following:
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Soak the garment in a high soap concentration in the basket.
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Batch the garment for 10 minutes.
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Run on filter for 8 minutes.

If the previous method is unsuccessful, try using sodium perborate or a commercial safety bleach. Soak in sodium perborate and a mild synthetic detergent overnight Rinse thoroughly. Sour with a mild acid. Rinse again. If fabric permits, try sodium hydrosulphite and sodium hypochlorite.Summary

Correcting soil redeposition is time consuming and the results are unpredictable. It is far better to avoid redeposition with the following.
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Properly functioning filter.
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Proper load classification.
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Clear solvent.
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Proper temperature of the solvent.Solvent Performance Test

Take a new white handkerchief and cut it in half, place one half with garments to be cleaned in a light load. Compare it to the uncleaned sample.