

# Recycling Promotion Plan for End of life Construction Equipment

July 25, 2001

Japan Construction Equipment Manufacturers Association (CEMA)

## 1. Foreword

With the enforcement of the “Basic Law for Establishing the Recycling-based society”, the target values of the recycle ratio have been determined for various items such as electric appliances and automobiles. The whole society has been moving toward the attainment of these target values. Considering the effects on the earth environment and effective utilization of limited resources, the disposal of end of life products has become a major concern of the whole society.

In the disposal of Construction Equipment, too, it is essential for us to take appropriate measures to cope with this issue. We, Japan Construction Equipment Manufacturers Association, have been working on various themes for waste disposal including the disposal of Rubber shoes. In addition to these past actions for waste disposal, we have drafted a comprehensive action plan for promoting the recycling of end of life Construction Equipment.

In order to promote the recycling of end of life Construction Equipment, machine manufacturers have to make efforts to manufacture equipment easy to recycle. On top of that, it is essential that all the parties concerned including parts manufacturers, users, waste treatment agents, and the Government should play their expected roles in their respective positions. In view of this point, this action plan is focused on the issues to be tackled by machine manufacturers and the issues to be worked upon by the other parties concerned.

This action plan is drafted basically with regard to mobile Construction Equipment in consideration of the present circumstances surrounding end of life Construction Equipment. With the progress of the situation, the plan will be reviewed and accommodate to future changes.

## 2. Issues to be worked upon by manufacturers

<Target to be attained by CEMA >

Recyclable ratio: 97% or higher

- While making efforts to maintain and improve the current recyclable ratio so far achieved, we, CEMA, should aim for further technological development to facilitate recycling -

Comparing with automobiles and electric appliances for domestic use, Construction Equipment uses less non-recyclable parts like resin parts. Accordingly, the recyclable ratio (ratio of technically recyclable parts: percentage by weight) of Construction Equipment is rather high at present. Member companies of CEMA are determined to maintain and further improve this high recycle feasibility ratio working upon the following issues:

1) Maintaining and further improving this high recyclable ratio

In accordance with “Definition and Calculation of the Recyclable Ratio of a New Model” specified separately, we calculate the recyclable ratio and strive to enhance the recycle feasibility ratio of a new model.

2) Technological development to facilitate recycling

In accordance with “Criteria for Assessment of Recyclable of Component and Actions for Improvement of Recycling” specified separately, we continue our positive efforts to study and develop the technology for component recycling and incorporate the technology into the design of new vehicles.

3) Promotion of 3R-targets (Reduce, Reuse, Recycle) and reduction of substances loading the environment.

We strive to reduce, reuse and recycle resources and reduce contaminant loads to the environment.

3. Issues to be worked upon by all the parties concerned

<We propose the following targets to be attacked by all the parties concerned>

Improvement of the recycle ratio (actual performance ratio) of Construction Equipment up to the recyclable ratio

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| (1) To improve the environment that facilitates recycling    | 2005 |
| (2) To implement the recycling plan for attaining the target | 2010 |

In order to promote the recycling, it is essential that all the parties concerned including manufacturers, users, waste treatment agents, and the Government should play their expected roles in their respective positions. As for the targets to be worked upon by all the parties concerned, we make following propositions so as to improve the recycle ratio (actual performance ratio: ratio representing the percentage of actually recycled.) We are determined to proceed toward the goal in our concerted efforts and cooperation.

1) Proposition for the method and actions for implementing the plan

We categorize parts of Construction Equipment into three groups: (1) larger steel plate

structure (Boom, Arm, Frame, etc.) (2) parts similar to automobile parts (interior parts, electrical components, etc.) (3) parts unique to Construction Equipment (Counterweight, Rubber shoe, Large Off-road tire). According to this categorization, we propose the best possible treatment method for parts of each category and take appropriate actions to implement it.

Particularly as for the treatment of three parts specified in “(3) parts unique to Construction Equipment,” we make positive efforts to develop proper treatment method including treatment costs and to secure treatment places and treatment route.

#### 2) Promotion for reusing parts and components

End of life Construction Equipment include numerous reusable parts and components. We will carry out survey and investigation to find methods appropriate for the promotion of reusing, make propositions for appropriate measures and ask for cooperation to all the parties concerned.

#### 3) Provision of information on promotion of recycling

End of life Construction Equipment are taken apart by dismantlers in most cases. We will offer users and dismantlers information on treatment method, treatment places and treatment route for the promotion of recycling.

#### 4) Establishment of method for assessment of recycle ratio and feedback of the assessment

Under present circumstances, the recycle ratio of end of life Construction Equipment (actual performance ratio) is not exactly known. It will be essential to establish the method for evaluating the recycle ratio so as to grasp the actual recycling status and enable quick actions for the solution of problems. We will develop a method for the assessment of recycle ratio and its feedback, provide information and ask for cooperation to parties concerned.