デュアルピニオンEPS

Dual-pinion type Electric Power Steering











開発の狙い Aims of Development

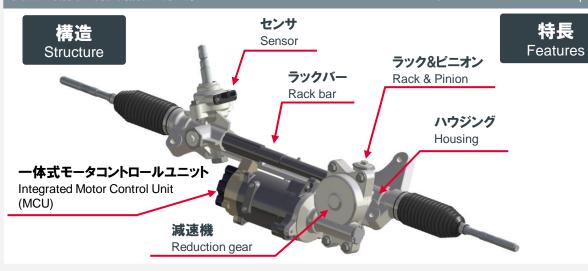
小型化と高出力化を両立したEPS

EPS that achieves both compact size and high rack force

各要素の最適設計により車両搭載性を向上

Optimal design of each element improves vehicle mountability

製品の概要と特長(構造・原理) Products Overview and Features (Structure and Principle)



センサ: 3体分割構造の採用により軽量化、小型化を実現

Sensor: Achieved weight reduction and compact size by adopting a three-body split structure

ハウジング: 分割位置の変更により軽量化、小型化を実現

Housing: Achieved weight reduction and compact size by changing the splitting position

減速機: 材料チューニングによる高強度化を図りウォームホイールギヤの小径化を実現

Reduction gear: Achieved a compact worm wheel gear by increasing strength through material tuning

ラック&ピニオン: 直交構造の採用により小型化、搭載性の向上を実現

Rack & Pinion: Achieved compact size and improved mountability by adopting an orthogonal structure

ラックバー: 摩擦溶接と冷間鍛造技術を適用し軽量化、小型化を実現

Rack bar: Achieved weight reduction and compact size by applying friction welding and cold forging

MCU: 独自開発の冗長設計に基づきモータ&ECU一体構造による小型化を実現

MCU: Achieved compact size through the integrated structure of motor and electrical control unit, based on original redundant design

シングルピニオンEPSとの相違点: 最大出力範囲、MCUレイアウトの自由度、構成部品点数

Comparison with single-pinion EPS: Maximum output range, flexibility of MCU layout and number of components

